A Descriptive Profile of Process in Serendipity

Supplementary Volume: Network Portfolio

Abigail McBirnie

Department of Information Studies

Aberystwyth University

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Overview and purpose

This network portfolio, presented as a supplementary volume intended to accompany the main thesis document, constitutes one of the substantive outcomes of the research.[1] The portfolio collects the fifty pairs of serendipity event structures modelled by the research.[2] The pairs correspond to the fifty *Citation Classics* (Garfield, 2012) that comprised the study sample.

The network portfolio serves as part of the response to one of the questions addressed by the study: what event structures are described in personal accounts of serendipity in research? As such, the network representations included in this supplementary volume should be deemed descriptive inferences, albeit inferences communicated most effectively, **not through words and numbers** (i.e. the primary approach adopted in the main volume), but **through pictures**.

Why a separate, supplementary volume?

The content of the present volume lies somewhere between main-body, thesis-level material and appendix-level material; hence, the decision to create a 'supplementary' volume. The collected network models are descriptive inferences and make a significant original contribution, not only to serendipity theory, but also to network studies;[3] as such, the models do not belong in an appendix.

[1] See the main volume, section 1.4.6.
[2] Full information on the modelling process is found in Chapters 4 and 5 of the main volume.
[3] See section 8.5 of the main volume.

Section 6.4.1.1 of the main volume provides a top-level summary of the models collected herein. This means that the thesis can be read without a detailed study of the network portfolio; however, a narrative summary—even a lengthy one—cannot communicate the complexity of a serendipity event structure in the same quick and clear way that an image can. Given a sample size of fifty and two different models, this problem is multiplied one hundred times in the present study.

Readers who choose not to explore the portfolio will miss out on much of the richness of the event structures. The author has found consistently over the course of her research that people have asked first and foremost 'to see the networks'; it does seem that, in the case of the serendipity event structures, a picture really is worth a thousand words.

There are also practical reasons for placing the network models in a separate volume: avoiding breaking the flow of the narrative text; permitting easy reference to the network models during reading of the main text; and, managing the digital and physical size of the thesis document.

Network models as inferences

Section 3.4 of the main volume highlighted three features of all models:

1. models are structural representations;
2. models are simplified representations; and,
3. models are subjective representations.

The discussion especially considered how these features serve to make modelling an interpretative process: paradoxically, while the three features of models ensure that all models are wrong, these same features allow the flexibility that makes models useful for describing complex phenomena.

Like any other model, a network representation is structured, simplified and subjective. As such, a network is more than just the 'result' of a data collection and analysis exercise: a network is a descriptive inference—one of many possible

higher-level understandings of a complex phenomenon—born out of a process of meaning making.

An important way that networks are communicated as inferences is through visualisation. Kolaczyk (2009, p. 49–50) explains:

> ... visual imagery plays a fundamental role in network analysis. Such has been the case since even before the advent of computers ... early efforts at network visualization were in the form of hand-drawn, annotated graphs and related diagrams of relational data. The computer brought with it the potential to automate, and the motivation to standardize, the drawing portion of this process. Nevertheless, network visualization remains a nontrivial task, for at least two main reasons.
>
> First, in most contexts, there is not necessarily one, single network graph representation for a given system of interest ... there may in fact be many potentially relevant network representations ... Second, even given a particular network graph representation of a complex system, visualization of that representation is still rendered nontrivial by the substantial challenges inherent in effectively communicating the information in a network graph using just the two-dimensional surface of a printed page
>
> ... there is both an enormous amount of flexibility in defining such mappings [i.e. network graphs] and a correspondingly diverse range of information that may be communicated, or lost, as the case may be.

As Kolaczyk's comments emphasise, the process of network visualisation is an interpretative one: decisions are taken to select one representation over another; to highlight certain information in the representation; and, to exclude other information altogether. These decisions are taken by the network modeller with the primary aim of the effective communication of a higher-level understanding of a complex phenomenon. In other words, drawing on the discussion presented in section 6.2.1 of the main volume, a network model represents an *inference as outcome* while network modelling and visualisation require synthesis and evaluation, the higher-order meaning making that defines the *inference process*.

A focus on generalised aspects

The main thesis text stresses the fact that the research focused on the generalised aspects of the serendipity event structures. The research was interested in studying the fifty *Citation Classics* as a sample first and foremost; however, as also discussed in the main volume, the phenomenological stance of the research required initial work at the case level in order to enable investigation at the sample level.

The network models in the portfolio reflect this focus on the generalised aspects of the serendipity event structures; for example, the text descriptions attached to the vertex labels are included in an appendix rather than alongside the network models in the body of the portfolio. This decision was taken to emphasise the point that the specifics of the text descriptions are not necessary to an understanding of the serendipity event structures. Although, readers will likely find some network representations more 'interesting' than others and may wish to spend time studying these 'interesting' networks in detail, it is important that readers also step back and consider the network models in terms of the larger collection they form.

The portfolio networks

Each network model presented in the portfolio comprises two components: a graphical visualisation and a numerical matrix.

The network visualisations

The networks were visualised in `ORA`[4] (Carley, 2012). Each network graph was drawn with the same spring-embedded algorithm to allow consistency, not only between the Model One and Model Two representations, but also across the study sample.[5] `ORA`'s `Display>Node Appearance>Node Shaper` function[6] was employed to 'shape' the network vertices according to attribute.

[4]See section 4.8.5 of the main volume for a discussion of this network software.

[5]See section 4.5.3 of the main volume for further discussion of the automated drawing of network graphs.

[6]This function is found in `ORA`'s 'Network Visualizer' screen.

In the network visualisations, the ORA 'Node Shaper' images (Carley, 2012)

represent vertices with the attributes of 'person', 'information' and 'object' respectively.[7] Arrowheads indicate link direction. Apart from 'Ego' (i.e. the narrator of the *Citation Classic*), the vertices are labelled by numbers. The text descriptions attached to the vertex labels are listed in the Appendix at the end of this volume.

Basic descriptive statistics, including vertex count, link count and density, are supplied for each network visualisation. Like the main volume, the supplementary volume follows the format recommended by Kozak and Krzanowski (2010) for the effective visual presentation of major/minor digits of data. Density is rounded to four digits, three major and one minor. Since none of the vertex or link counts involve more than three digits, these counts are presented unrounded and as major digits.

It is important for the reader to be aware of two points concerning the network visualisations. Firstly, the network graphs may be rotated 360 degrees in either direction from their initial positions with no change to the network structure. The reader may find 'mentally rotating' some of the graphs helpful for comparison purposes. Secondly, beyond the label indicating the 'Ego', there is no assumption that vertex labels must match across a model pair. For example, consider two vertices, one from Model One and one from Model Two. Both vertices may have the 'person' attribute and be labelled 'v2'; however, this does not imply that the two vertices represent the same person coded from the *Citation Classic*.

The network matrices

Due to practical issues, the full information contained in the network models could not be communicated purely through the network visualisations. For this

[7] See section 2.3.3.2 of the main volume for a discussion of these attributes.

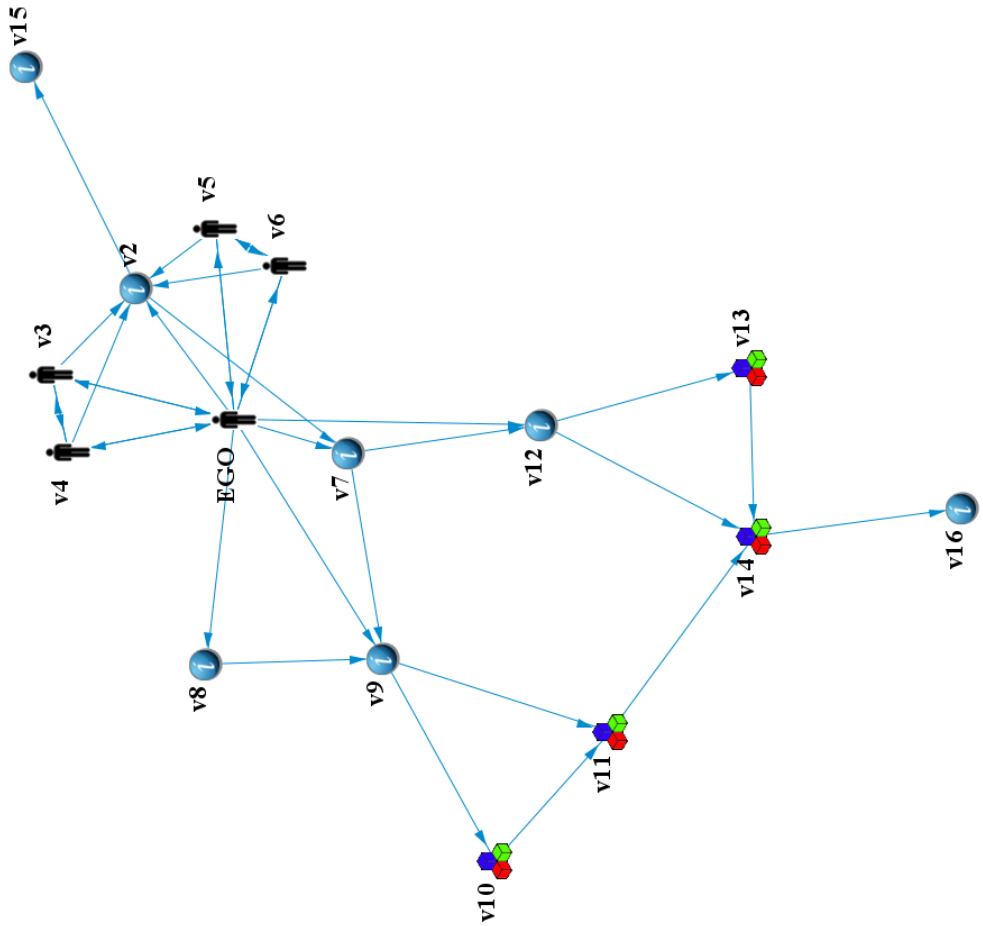
reason, the network matrices are the second, and necessary, component of the network representations.[8]

The matrices provide specific information on link weights. The links in the Model One networks carry weights, whereas the links in the Model Two networks do not. While it would have been possible to draw the thickness of lines in the networks according to the weights of the links, the visual information such an approach presents is not specific enough. For example, does a given thicker line represent a weight of 2, 3, or 15? From a network visualisation alone, one can only say for certain that a thicker line has 'a weight'. Thicker lines can also create practical problems, especially in the case of tightly-linked collections of vertices: with thick lines in such a small drawing area, individual links are effectively obliterated, subsumed into what appears as a coloured-in space.

The matrices also enable proper inspection of the larger networks. It can be difficult, despite careful and considered drawing, to present all visual information clearly in larger networks: vertices may crowd together and links may cross frequently. The matrices aid the visual interpretation by showing clearly the links between vertices, as well as the direction of the links.

[8]The author would like to acknowledge her use of Gregory Tauer's online *Excel/CSV to LaTeX Table Fragments Converter* (Tauer, 2012). This tool made the somewhat overwhelming task of preparing the network matrices for presentation in the portfolio manageable.

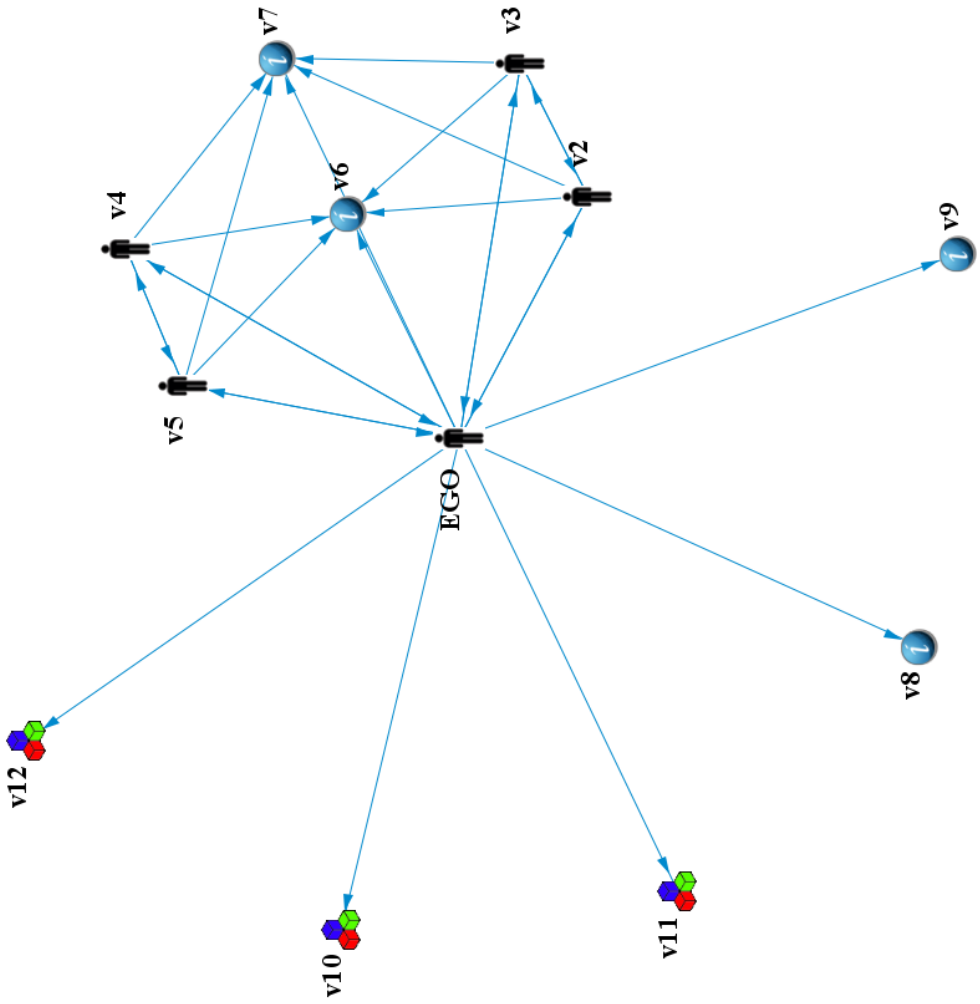
1. Adams 1981



Visualisation 1.1: Adams 1981, Model One - vertex count=16, link count=34, density=0.142

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16
EGO	0	3	1	1	1	1	1	1	1	0	0	1	0	0	0	0
v2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
v3	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
v4	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
v5	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
v6	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
v8	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 1.1: Adams 1981, Model One - weighted matrix

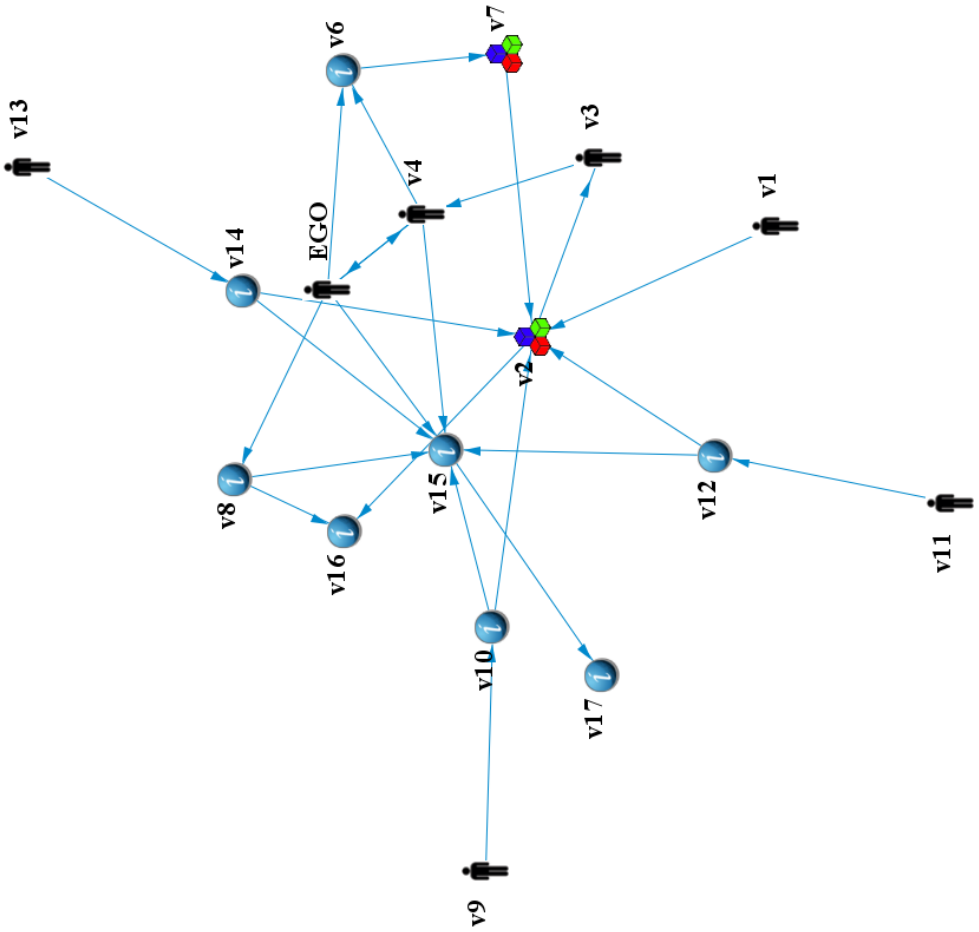


Visualisation 1.2: Adams 1981, Model Two - vertext count=12, link count=27, density=0.20$_5$

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12
EGO	0	1	1	1	1	1	1	1	1	1	1	1
v2	1	0	1	0	0	1	1	0	0	0	0	0
v3	1	1	0	0	0	1	1	0	0	0	0	0
v4	1	0	0	0	1	1	1	0	0	0	0	0
v5	1	0	0	1	0	1	1	0	0	0	0	0
v6	0	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 1.2: Adams 1981, Model Two - binary matrix

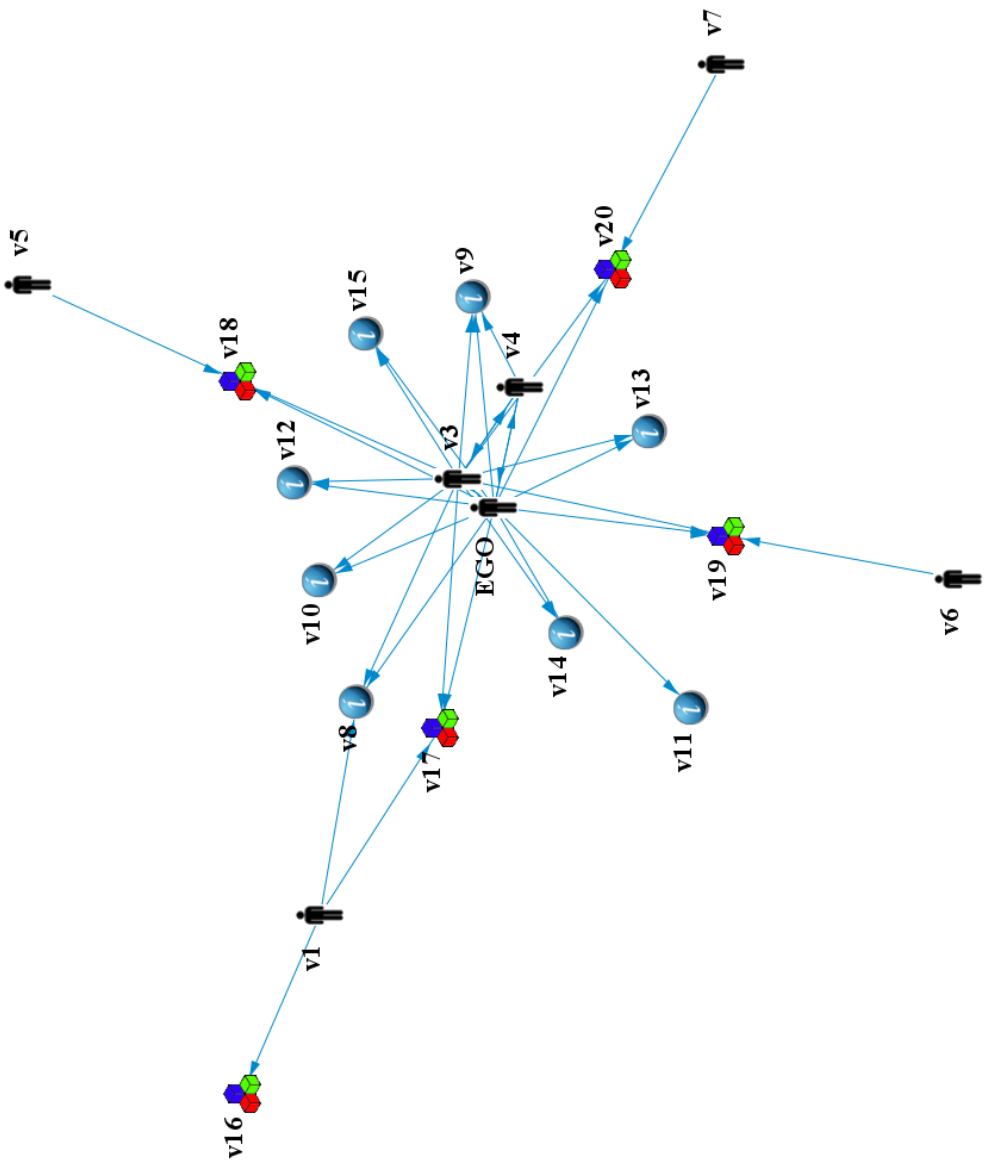
2. Almeida 1980



Visualisation 2.1: Almeida 1980, Model One - vertex count=17, link count=25, density=0.09

	v1	v2	v3	v4	EGO	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17
v1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
v4	0	0	0	0	3	1	0	0	0	0	0	0	0	0	1	0	0
EGO	0	0	0	3	0	1	0	1	0	0	0	0	0	0	1	0	0
v6	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
v7	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
v9	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
v10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v12	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v14	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 2.1: Almeida 1980, Model One - weighted matrix

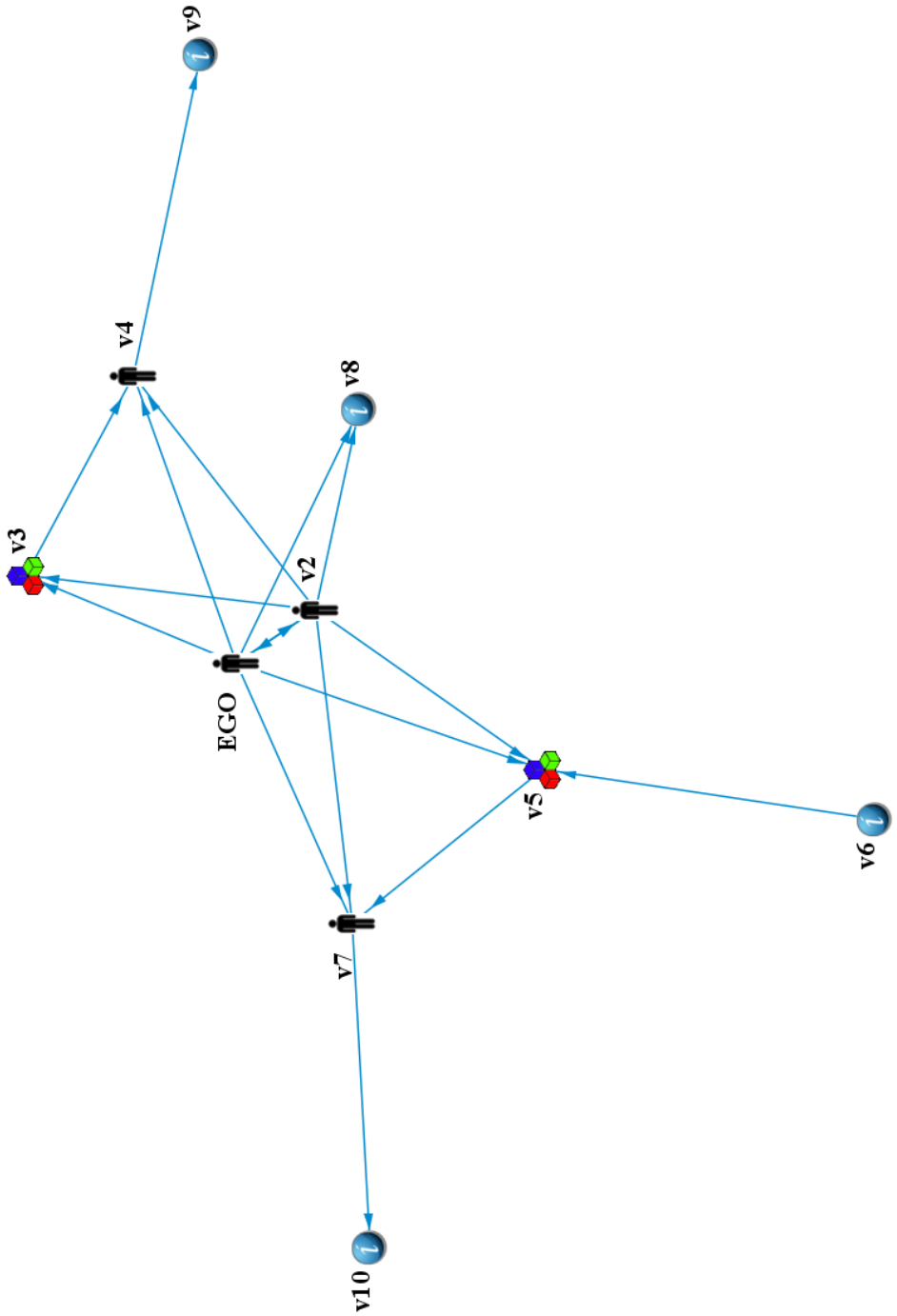


Visualisation 2.2: Almeida 1980, Model Two - vertext count=20, link count=36, density=0.095

	v1	EGO	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19	v20
v1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0
EGO	0	0	1	1	0	0	0	1	1	1	1	1	1	1	1	0	1	1	1	1
v3	0	1	0	1	0	0	0	1	1	1	0	1	1	1	1	0	1	1	1	1
v4	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
v5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 2.2: Almeida 1980, Model Two - binary matrix

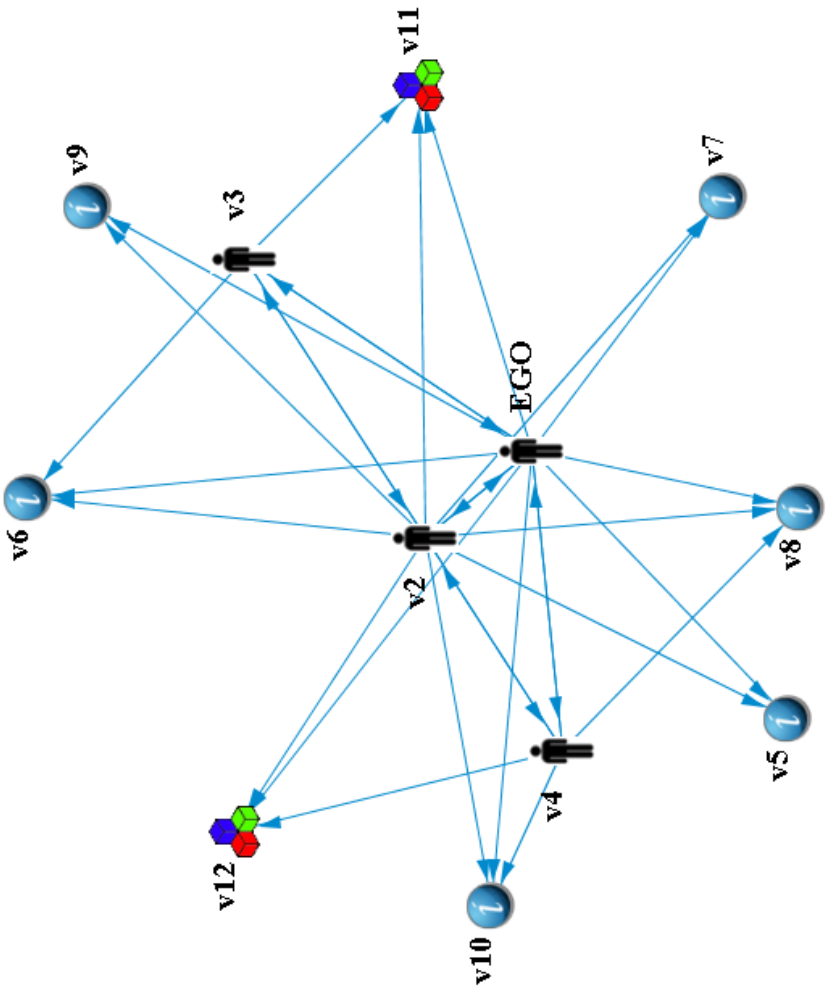
3. Ashbaugh 1979



Visualisation 3.1: Ashbaugh 1979, Model One - vertex count=10, link count=17, density=0.189

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10
EGO	0	3	1	1	1	0	1	1	0	0
v2	3	0	1	1	1	0	1	1	0	0
v3	0	0	0	1	0	0	0	0	0	0
v4	0	0	0	0	0	0	0	0	1	0
v5	0	0	0	0	0	0	1	0	0	0
v6	0	0	0	0	1	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	1
v8	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0

Matrix 3.1: Ashbaugh 1979, Model One - weighted matrix

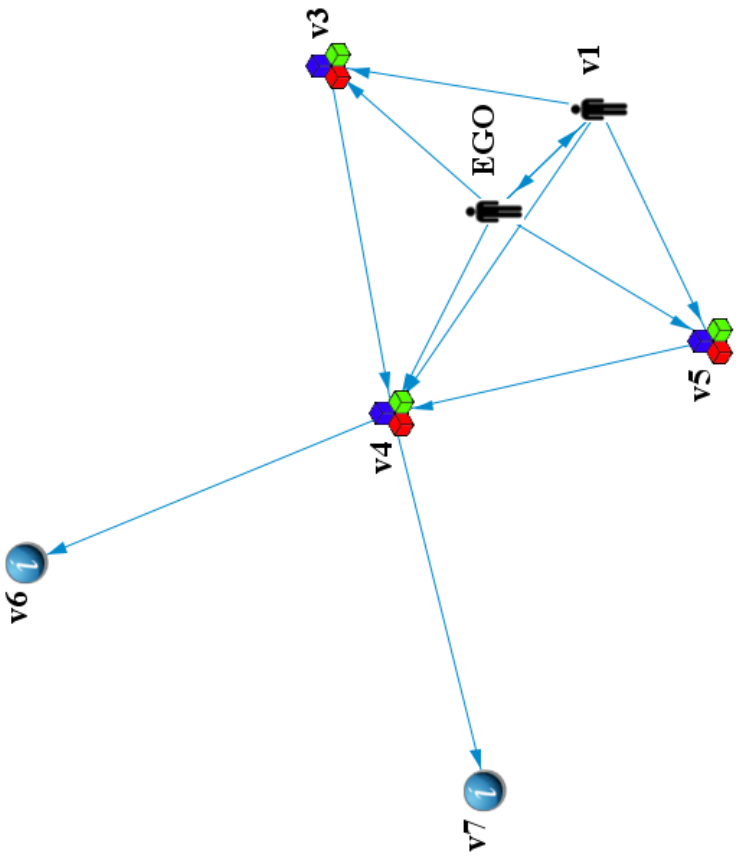


Visualisation 3.2: Ashbaugh 1979, Model Two - vertext count=12, link count=31, density=0.235

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12
EGO	0	1	1	1	1	1	1	1	1	1	1	1
v2	1	0	1	1	1	1	1	1	1	1	1	1
v3	1	1	0	0	0	1	0	0	0	0	1	0
v4	1	1	0	0	0	0	0	1	0	1	0	1
v5	0	0	0	0	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 3.2: Ashbaugh 1979, Model Two - binary matrix

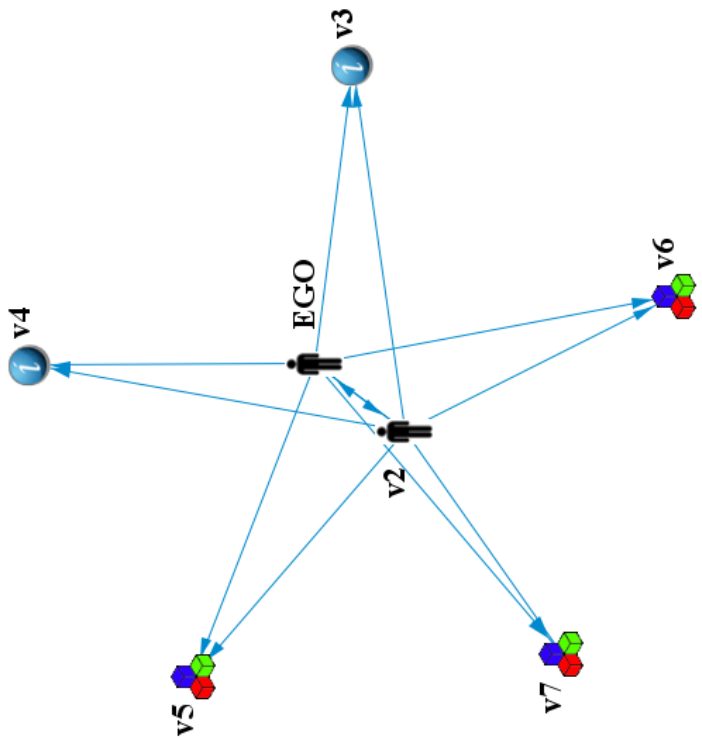
4. Bandurski 1981



Visualisation 4.1: Bandurski 1981, Model One - vertex count=7, link count=12, density=0.286

	v1	EGO	v3	v4	v5	v6	v7
v1	0	2	1	1	1	0	0
EGO	2	0	1	1	1	0	0
v3	0	0	0	1	0	0	0
v4	0	0	0	0	0	1	1
v5	0	0	0	1	0	0	0
v6	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0

Matrix 4.1: Bandurski 1981, Model One - weighted matrix

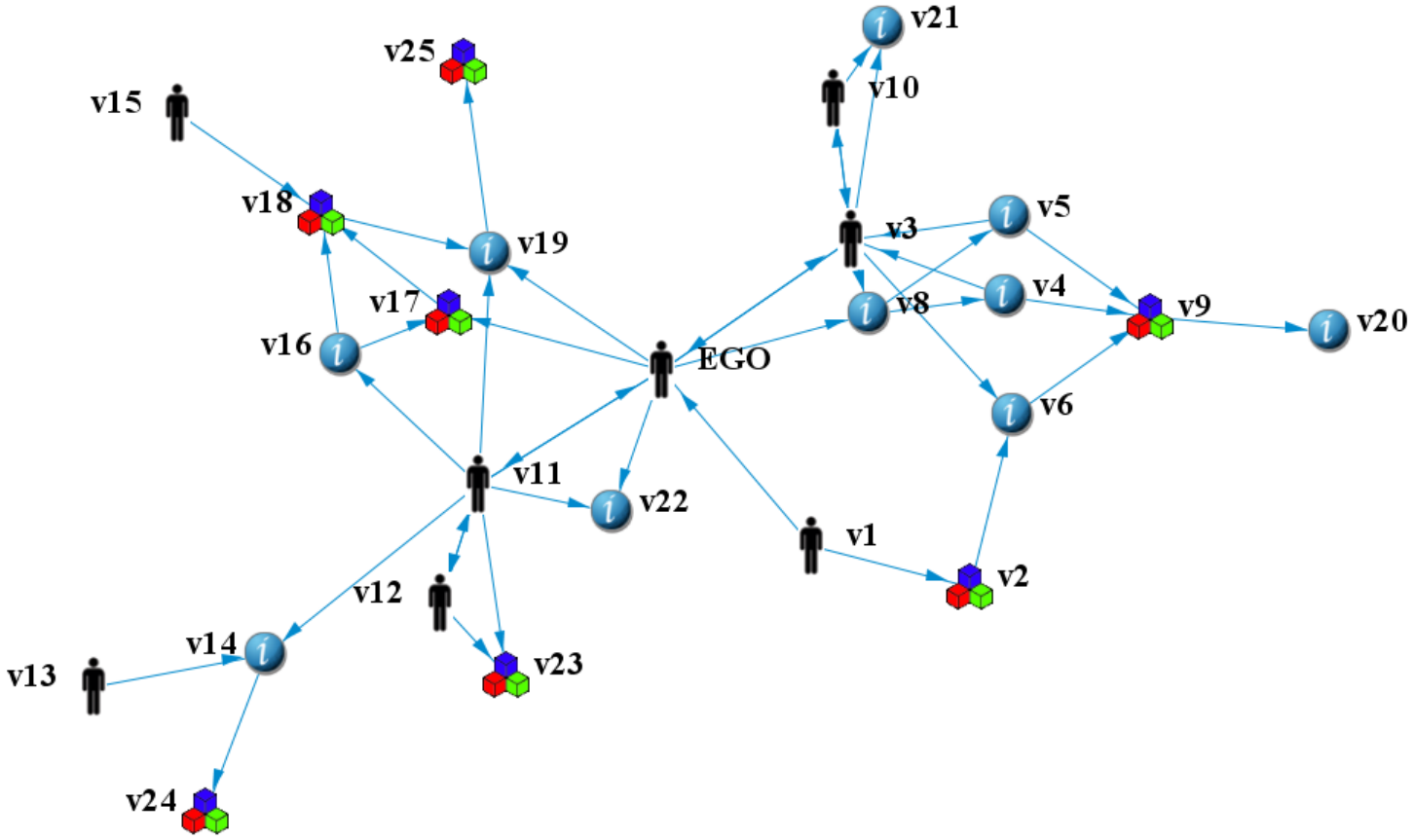


Visualisation 4.2: Bandurski 1981, Model Two - vertext count=7, link count=12, density=0.286

	EGO	v2	v3	v4	v5	v6	v7
EGO	0	1	1	1	1	1	1
v2	1	0	1	1	1	1	1
v3	0	0	0	0	0	0	0
v4	0	0	0	0	0	0	0
v5	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0

Matrix 4.2: Bandurski 1981, Model Two - binary matrix

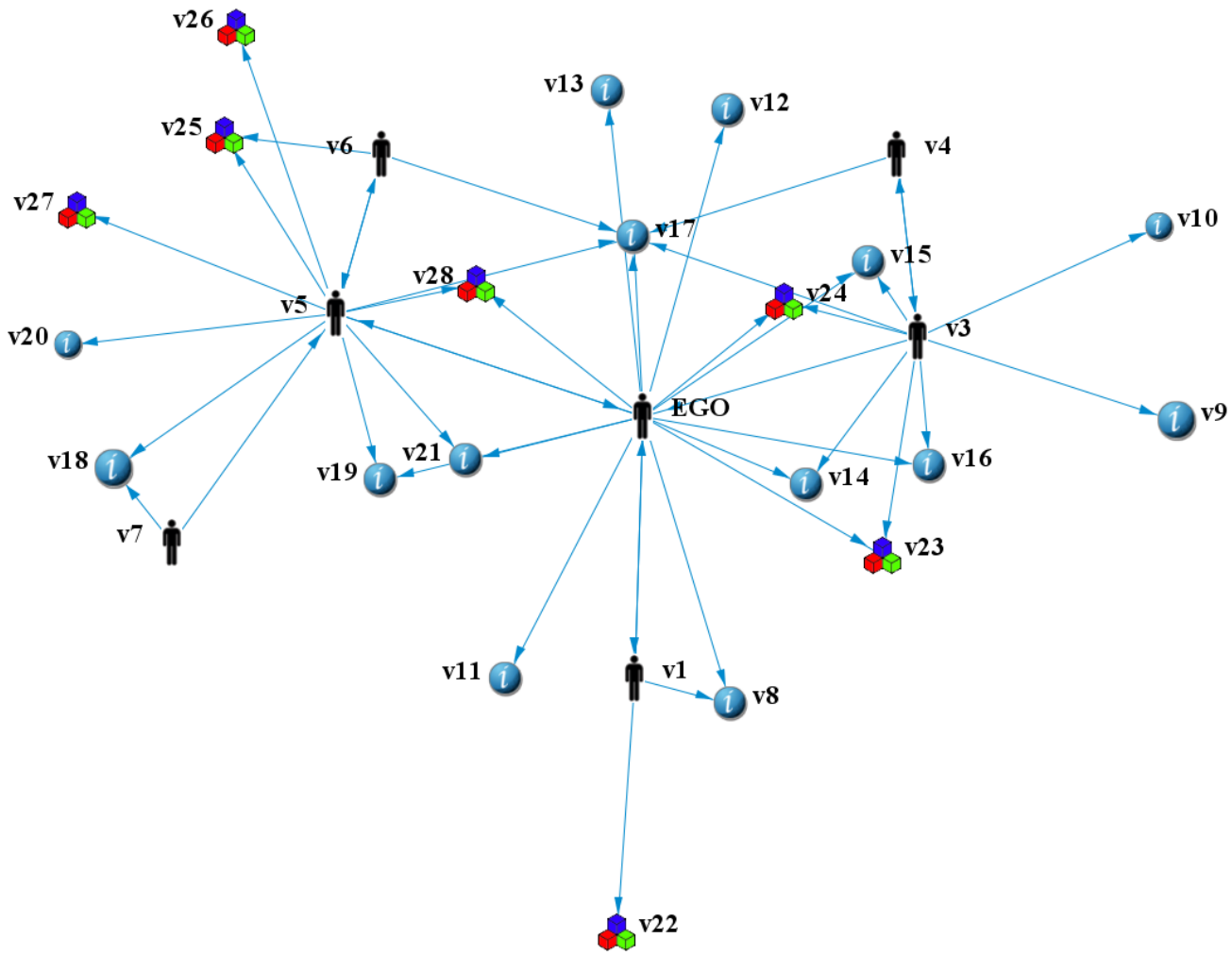
5. Beadle 1978



Visualisation 5.1: Beadle 1978, Model One - vertex count=25, link count=41, density=0.06*8*

	v1	v2	v3	v4	v5	v6	EGO	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19	v20	v21	v22	v23	v24	v25
v1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v3	0	0	0	0	0	1	2	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
v4	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v5	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EGO	0	0	1	0	0	0	0	1	0	0	2	0	0	0	0	0	1	0	1	0	0	1	0	0	0
v8	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v10	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
v11	0	0	0	0	0	0	2	0	0	0	0	1	0	1	0	1	0	0	1	0	0	1	1	0	0
v12	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 5.1: Beadle 1978, Model One - weighted matrix

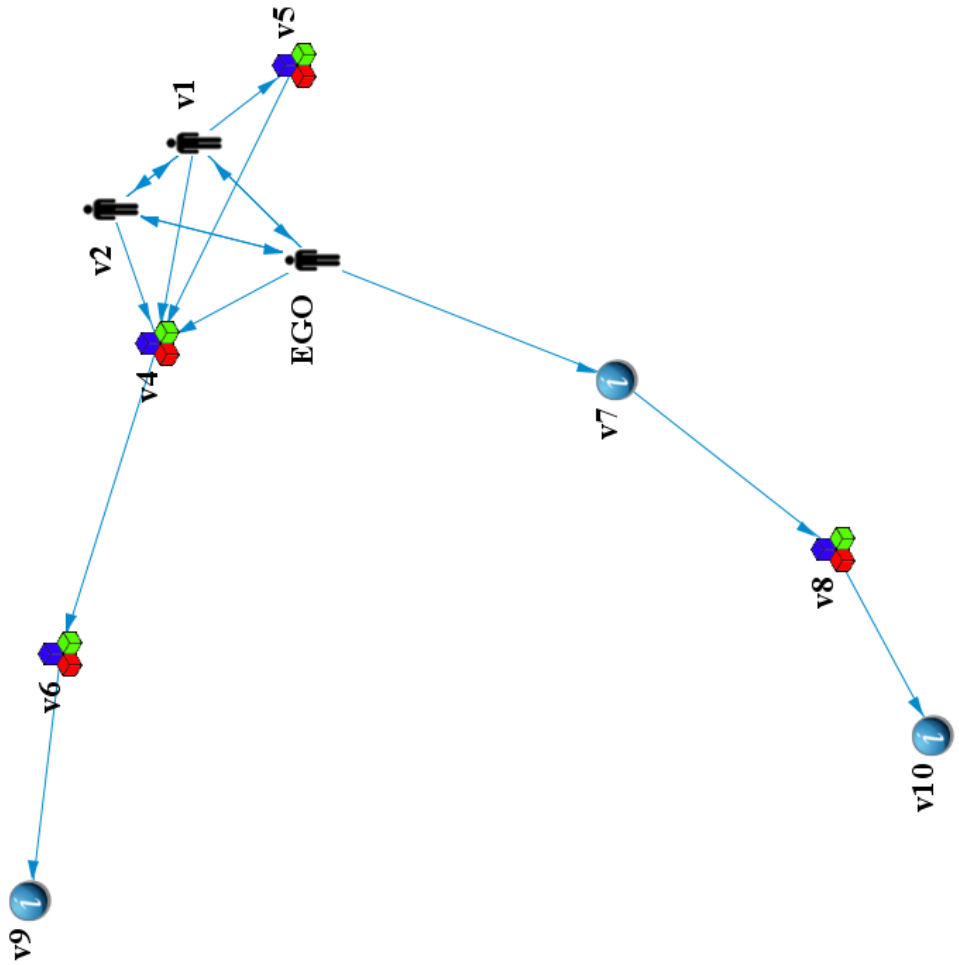


Visualisation 5.2: Beadle 1978, Model Two - vertext count=28, link count=46, density=0.061

	v1	EGO	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19	v20	v21	v22	v23	v24	v25	v26	v27	v28
v1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
EGO	1	0	0	0	1	0	0	1	0	0	1	1	1	1	1	1	1	0	1	0	1	0	1	1	0	0	0	1
v3	0	1	0	1	0	0	0	0	1	1	0	0	0	1	1	1	1	0	0	0	0	0	1	1	0	0	0	0
v4	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
v5	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	1	1	1	1
v6	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
v7	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 5.2: Beadle 1978, Model Two - binary matrix

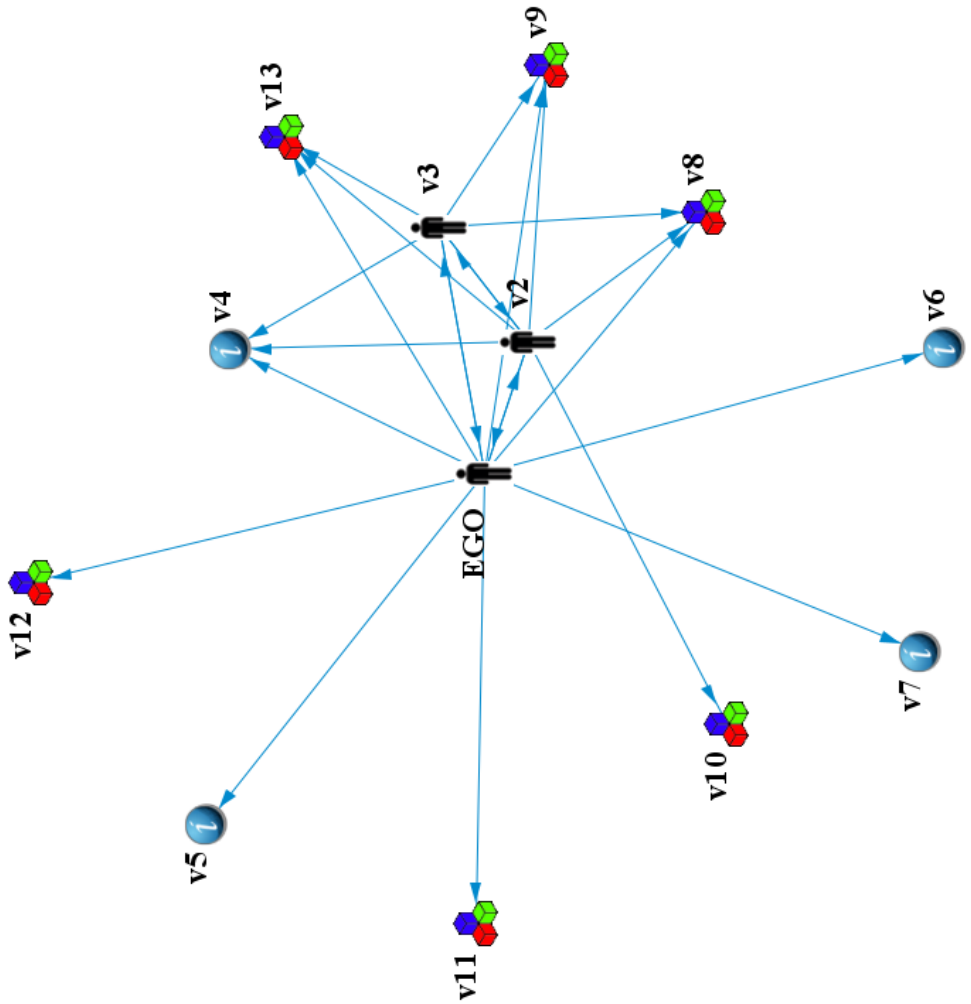
6. Blanchard 1986



Visualisation 6.1: Blanchard 1986, Model One - vertex count=10, link count=16, density=0.178

	v1	v2	EGO	v4	v5	v6	v7	v8	v9	v10
v1	0	2	2	1	1	0	0	0	0	0
v2	2	0	2	1	0	0	0	0	0	0
EGO	2	2	0	1	0	0	1	0	0	0
v4	0	0	0	0	0	2	0	0	0	0
v5	0	0	0	1	0	0	0	0	0	0
v6	0	0	0	0	0	0	0	0	1	0
v7	0	0	0	0	0	0	0	1	0	0
v8	0	0	0	0	0	0	0	0	0	1
v9	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0

Matrix 6.1: Blanchard 1986, Model One - weighted matrix

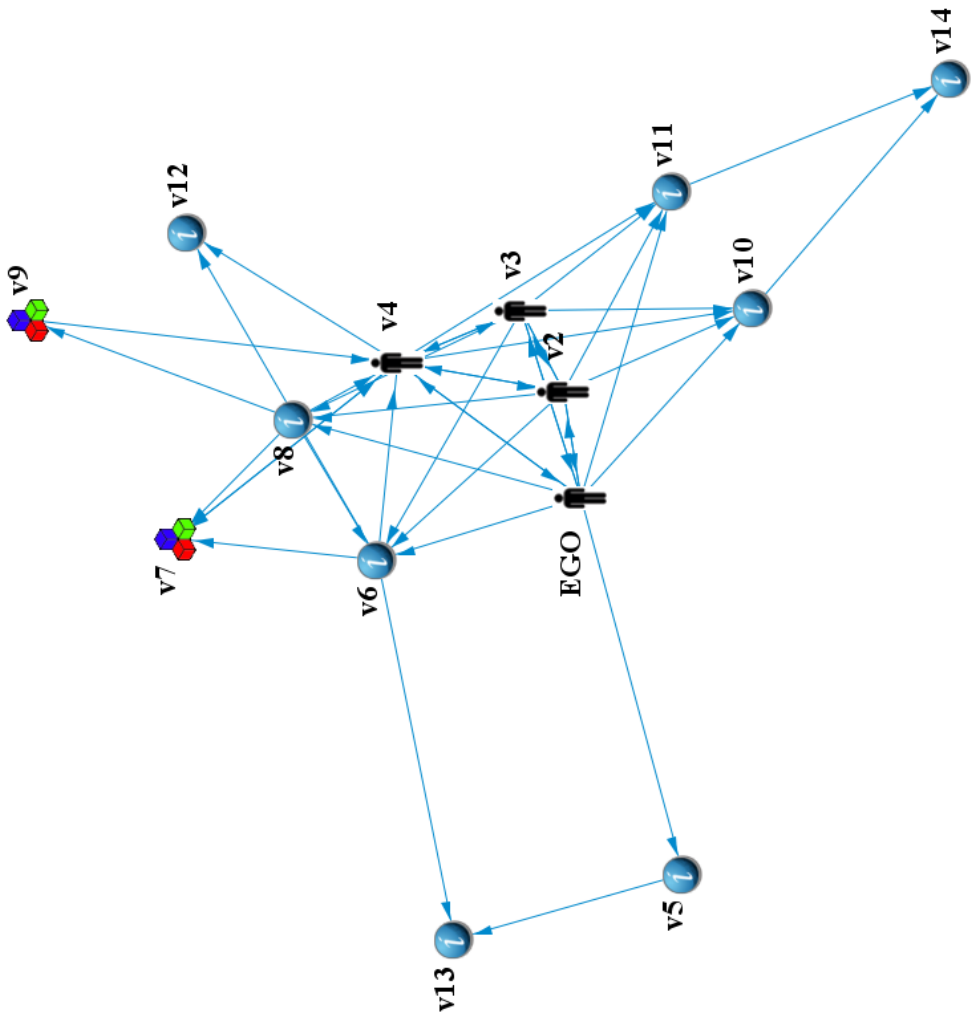


Visualisation 6.2: Blanchard 1986, Model Two - vertexts count=13, link count=24, density=0.154

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13
EGO	0	1	1	1	1	1	1	1	1	0	1	1	1
v2	1	0	1	1	0	0	0	1	1	1	0	0	1
v3	1	1	0	1	0	0	0	1	1	0	0	0	1
v4	0	0	0	0	0	0	0	0	0	0	0	0	0
v5	0	0	0	0	0	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 6.2: Blanchard 1986, Model Two - binary matrix

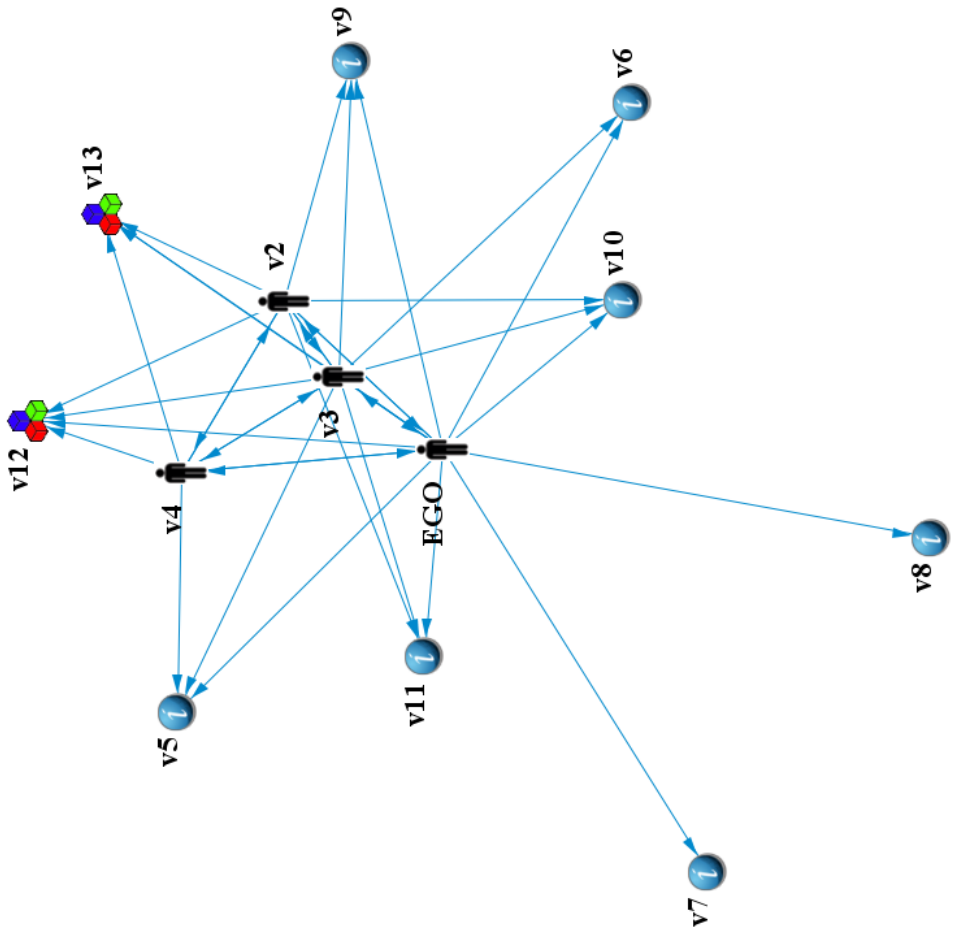
7. Boyd 1982



Visualisation 7.1: Boyd 1982, Model One - vertex count=14, link count=42, density=0.231

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14
EGO	0	4	3	3	1	1	0	1	0	1	1	0	0	0
v2	4	0	3	2	0	1	0	1	0	1	1	0	0	0
v3	3	3	0	3	0	1	0	1	0	1	1	0	0	0
v4	3	2	3	0	0	0	1	0	0	1	1	1	0	0
v5	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v6	0	0	0	1	0	0	1	0	0	0	0	1	1	0
v7	0	0	0	2	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	1	0	1	1	0	1	0	0	0	0	0
v9	0	0	0	1	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 7.1: Boyd 1982, Model One - weighted matrix

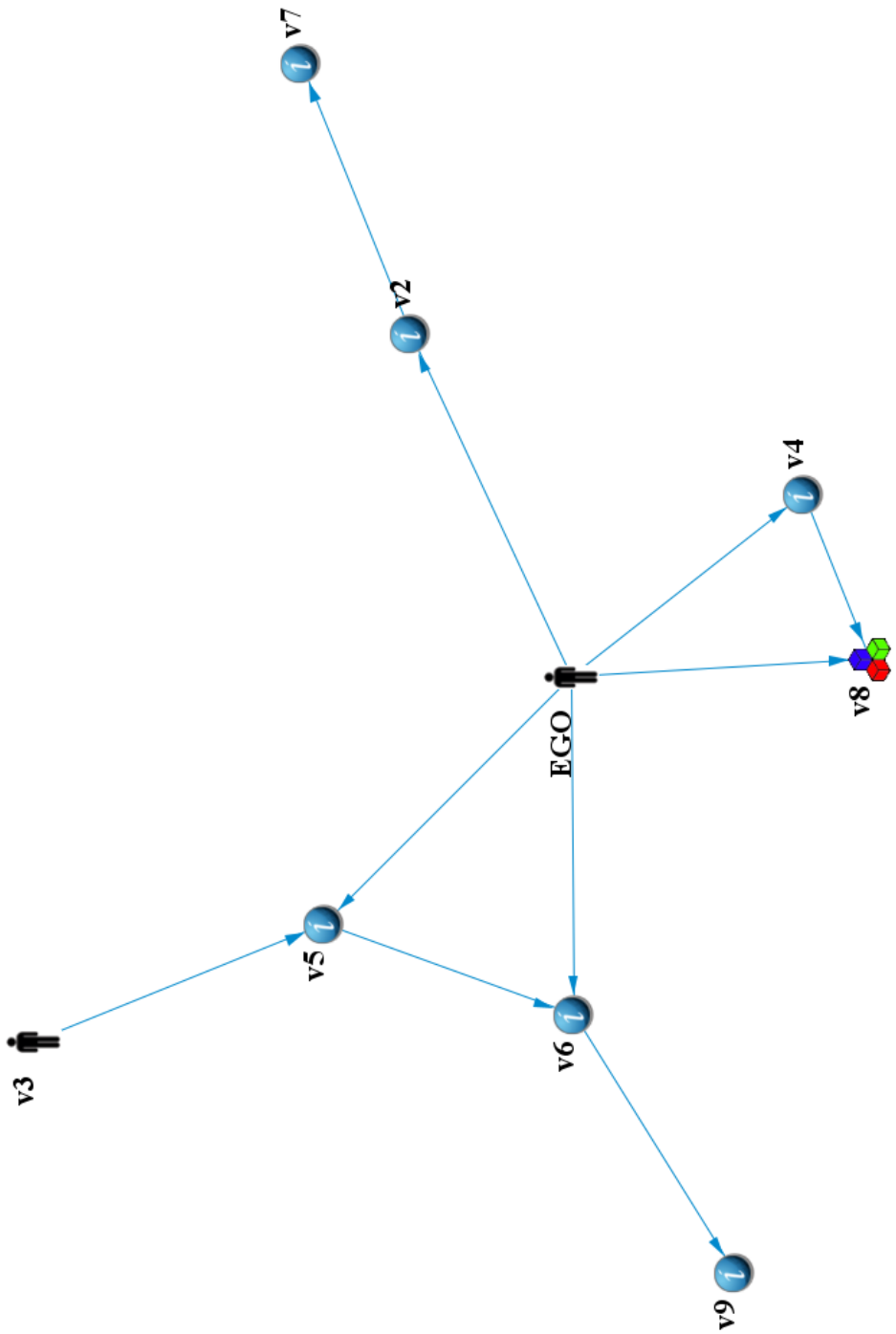


Visualisation 7.2: Boyd 1982, Model Two - vertext count=13, link count=36, density=0.231

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13
EGO	0	1	1	1	1	1	1	1	1	1	1	1	1
v2	1	0	1	1	0	0	0	0	1	1	1	1	1
v3	1	1	0	1	1	1	0	0	1	1	1	1	1
v4	1	1	1	0	1	0	0	0	0	0	0	1	1
v5	0	0	0	0	0	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 7.2: Boyd 1982, Model Two - binary matrix

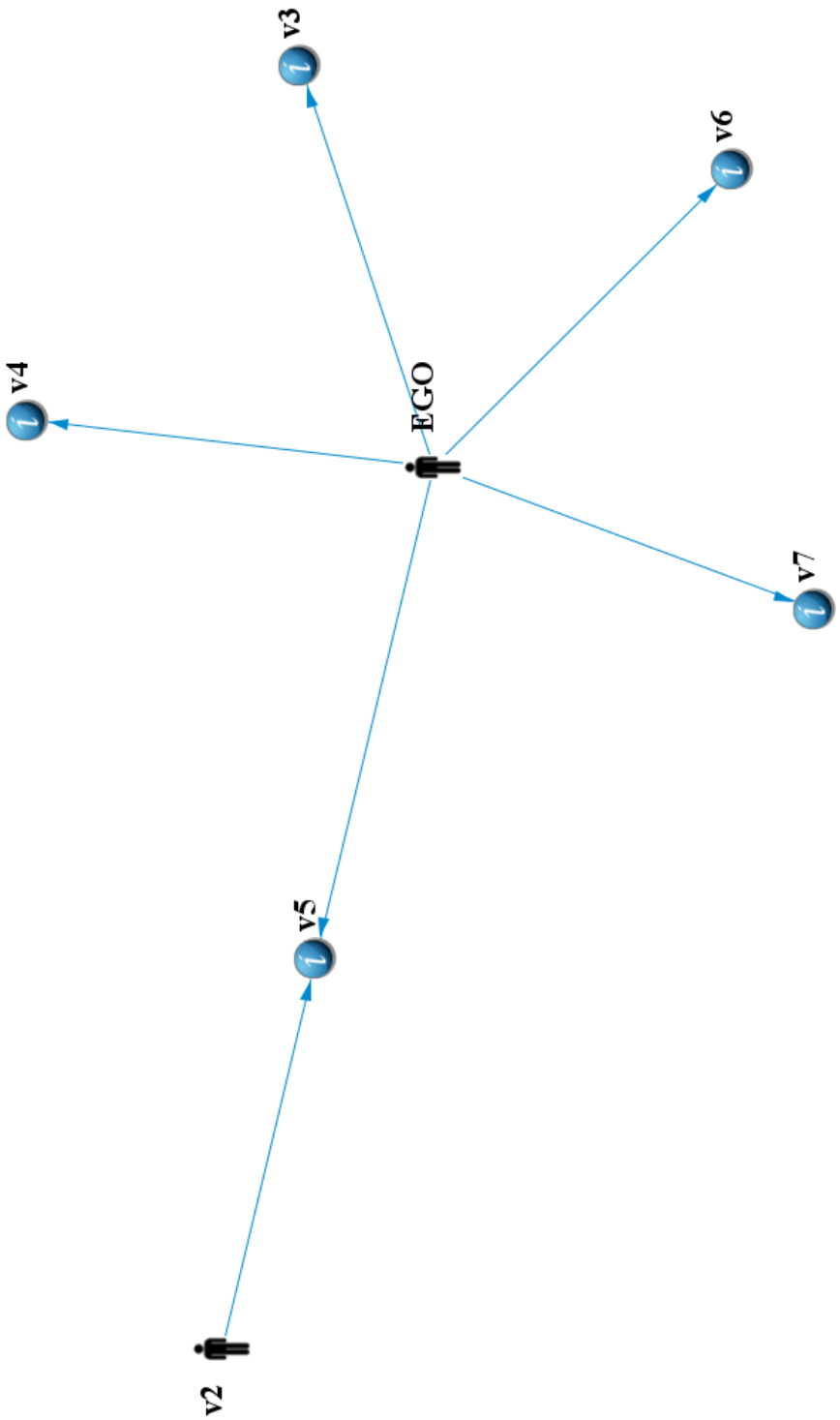
8. Brown 1981



Visualisation 8.1: Brown 1981, Model One - vertex count=9, link count=10, density=0.13*9*

	EGO	v2	v3	v4	v5	v6	v7	v8	v9
EGO	0	1	0	1	1	1	0	1	0
v2	0	0	0	0	0	0	1	0	0
v3	0	0	0	0	1	0	0	0	0
v4	0	0	0	0	0	0	0	1	0
v5	0	0	0	0	0	1	0	0	0
v6	0	0	0	0	0	0	0	0	1
v7	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0

Matrix 8.1: Brown 1981, Model One - weighted matrix

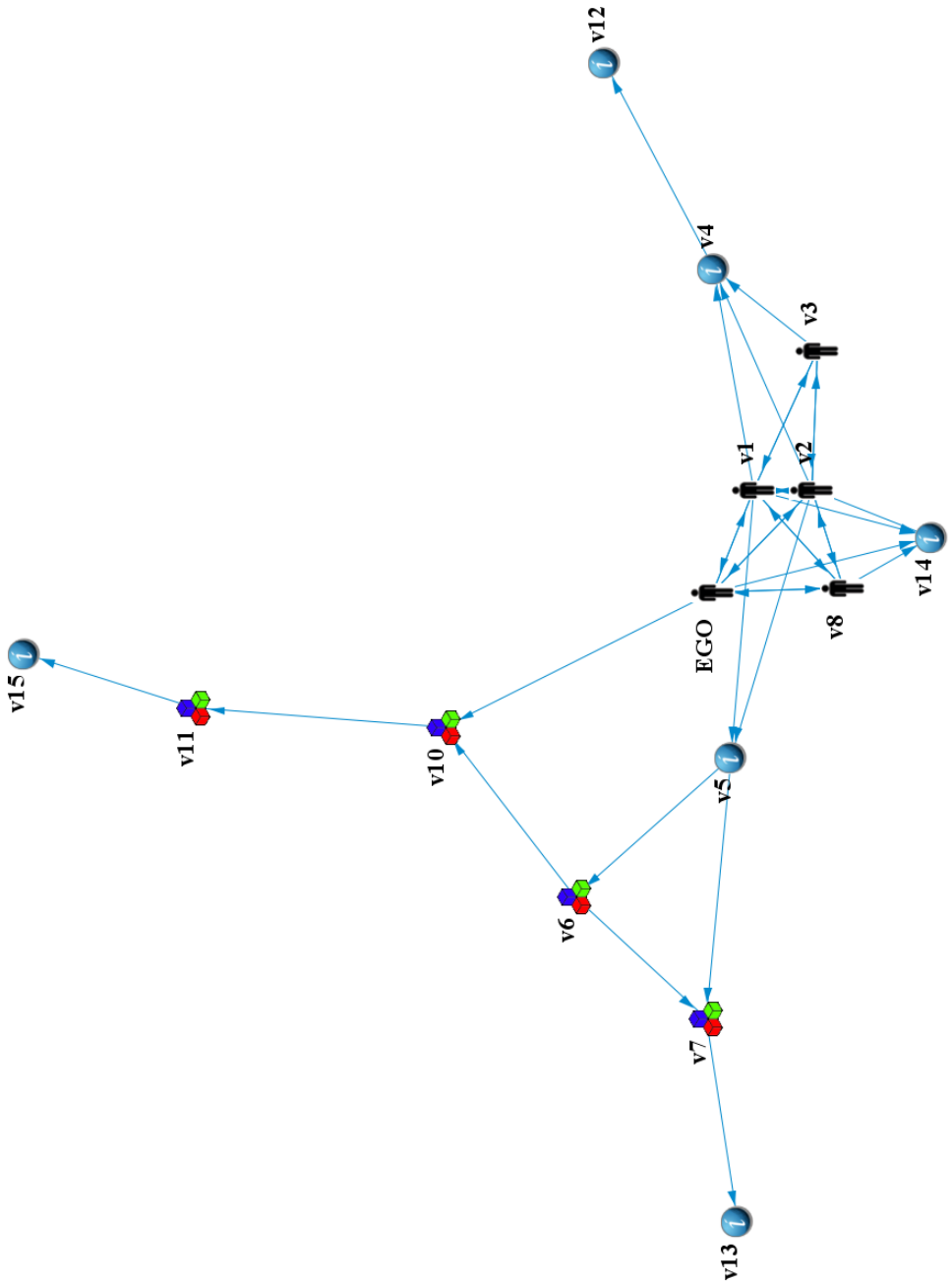


Visualisation 8.2: Brown 1981, Model Two - vertext count=7, link count=6, density=0.143

	EGO	v2	v3	v4	v5	v6	v7
EGO	0	0	1	1	1	1	1
v2	0	0	0	0	1	0	0
v3	0	0	0	0	0	0	0
v4	0	0	0	0	0	0	0
v5	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0

Matrix 8.2: Brown 1981, Model Two - binary matrix

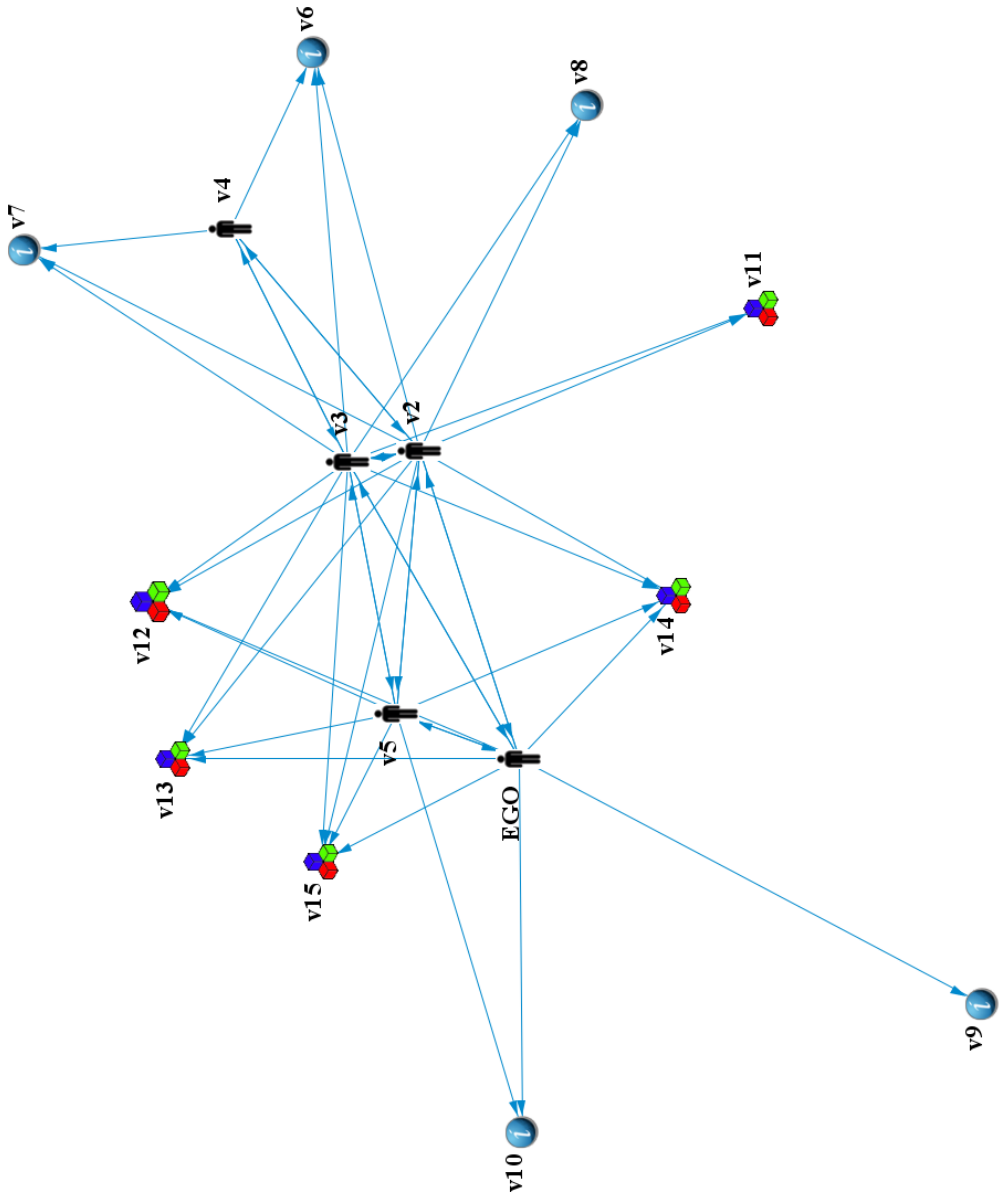
9. Bull 1986



Visualisation 9.1: Bull 1986, Model One - vertex count=15, link count=34, density=0.16

	v1	v2	v3	v4	v5	v6	v7	v8	EGO	v10	v11	v12	v13	v14	v15
v1	0	3	1	1	1	0	0	1	1	0	0	0	0	1	0
v2	3	0	1	1	1	0	0	1	1	0	0	0	0	1	0
v3	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0
v4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v5	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v8	1	1	0	0	0	0	0	0	1	0	0	0	0	1	0
EGO	1	1	0	0	0	0	0	1	0	1	0	0	0	1	0
v10	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 9.1: Bull 1986, Model One - weighted matrix

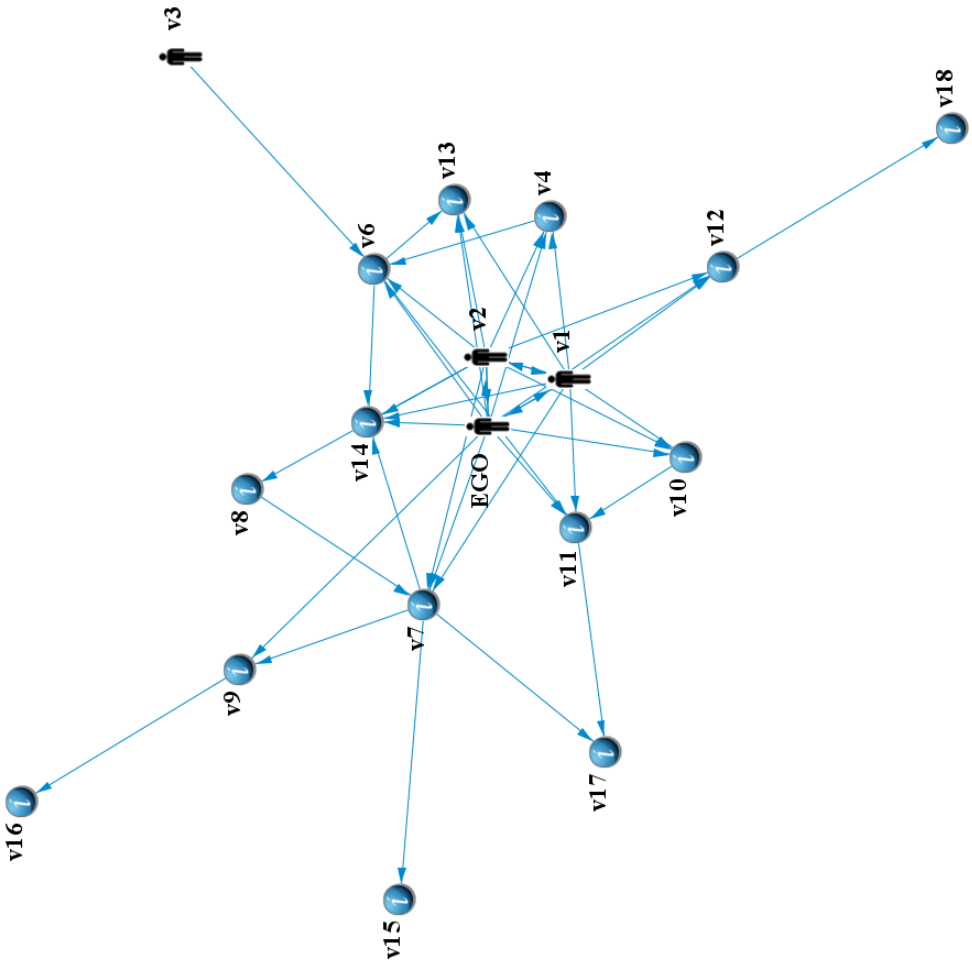


Visualisation 9.2: Bull 1986, Model Two - vertext count=15, link count=45, density=0.214

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15
EGO	0	1	1	0	1	0	0	0	1	1	0	1	1	1	1
v2	1	0	1	1	1	1	1	1	0	0	1	1	1	1	1
v3	1	1	0	1	1	1	1	1	0	0	1	1	1	1	1
v4	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0
v5	1	1	1	0	0	0	0	0	0	1	0	1	1	1	1
v6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 9.2: Bull 1986, Model Two - binary matrix

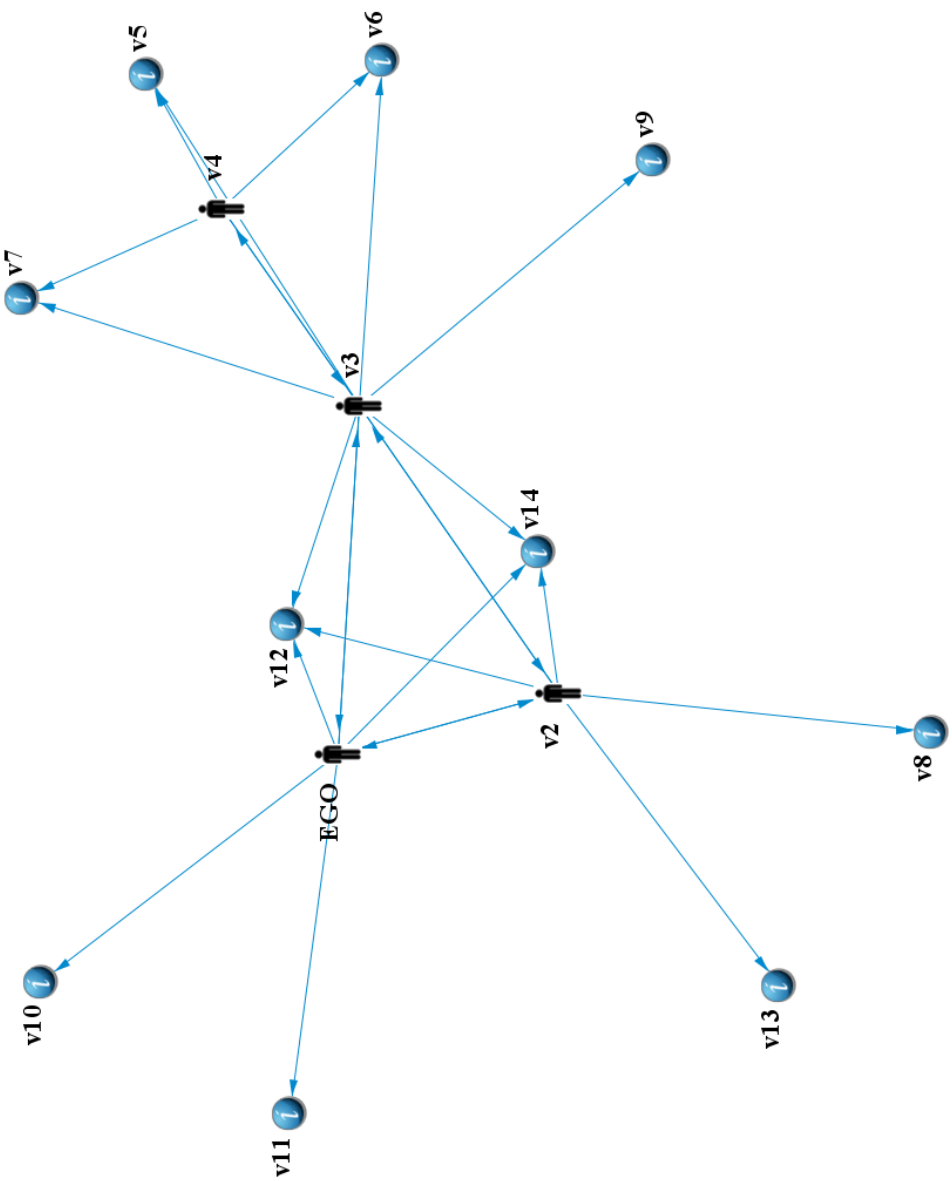
10. Buzbee 1992



Visualisation 10.1: Buzbee 1992, Model One - vertex count=18, link count=44, density=0.144

	v1	v2	v3	v4	v5	v6	v7	v8	EGO	v10	v11	v12	v13	v14	v15	v16	v17	v18
v1	0	4	0	1	4	0	4	0	0	1	1	1	1	1	0	0	0	0
v2	5	0	0	1	5	2	1	1	0	1	0	1	1	1	0	0	0	0
v3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
v4	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
EGO	5	4	0	1	0	1	2	0	1	1	1	1	1	1	0	0	0	0
v6	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0
v7	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	1	0
v8	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v10	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 10.1: Buzbee 1992, Model One - weighted matrix

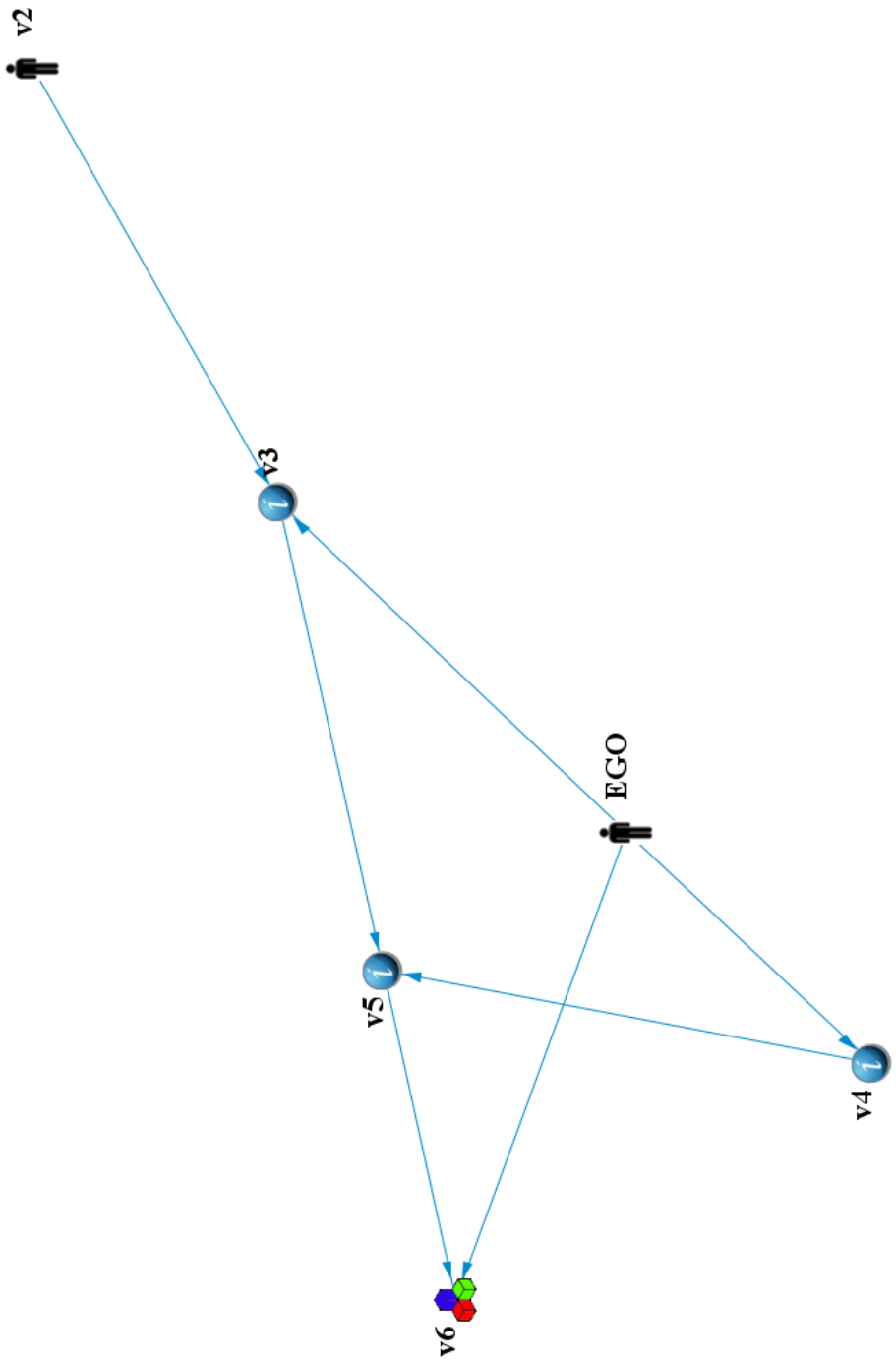


Visualisation 10.2: Buzbee 1992, Model Two - vertext count=14, link count=25, density=0.137

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14
EGO	0	1	1	0	0	0	0	0	0	1	1	1	0	1
v2	1	0	1	0	0	0	0	1	0	0	0	1	1	1
v3	1	1	0	1	1	1	1	0	1	0	0	1	0	1
v4	0	0	1	0	1	1	1	0	0	0	0	0	0	0
v5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 10.2: Buzbee 1992, Model Two - binary matrix

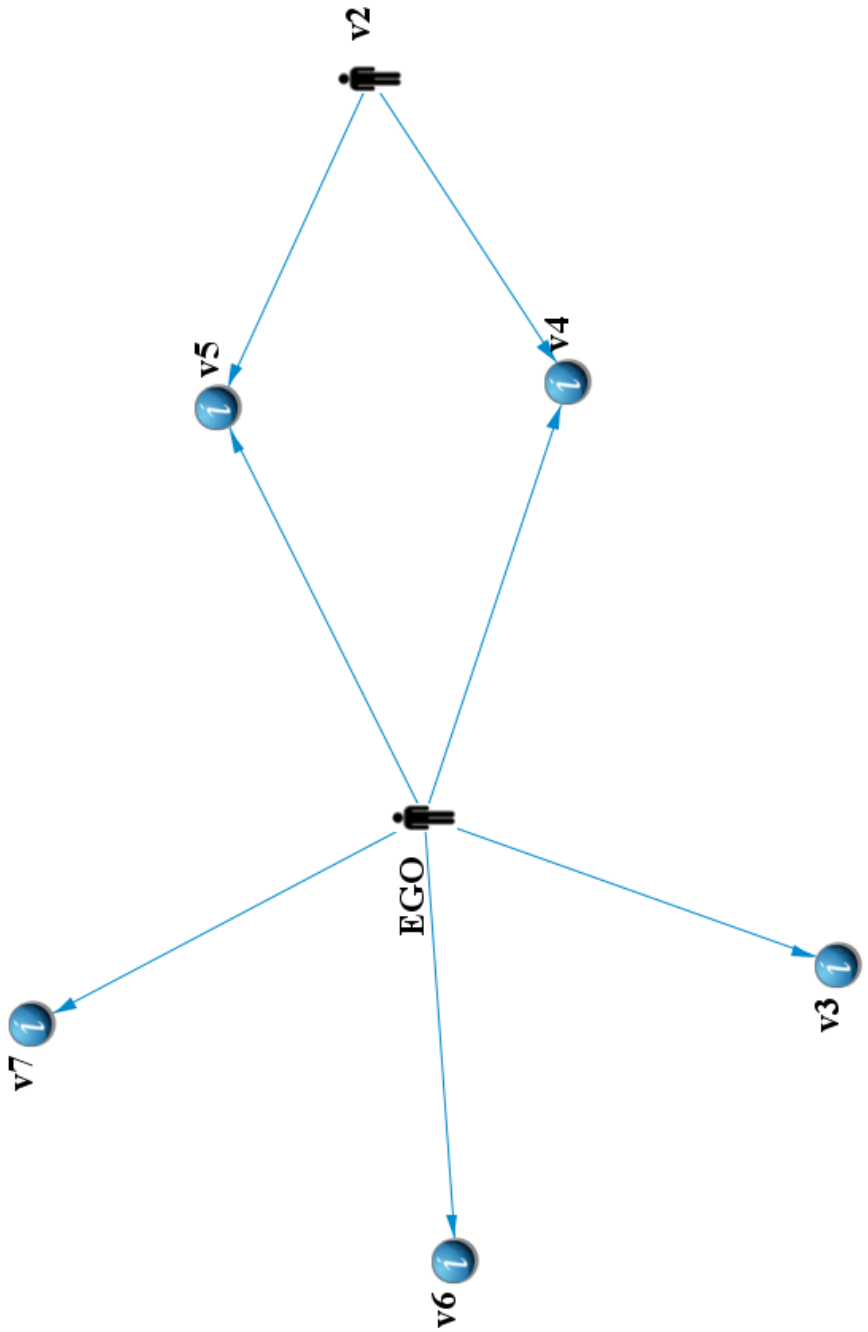
11. Cleaver 1981



Visualisation 11.1: Cleaver 1981, Model One - vertex count=6, link count=7, density=0.233

	EGO	v2	v3	v4	v5	v6
EGO	0	0	1	1	0	1
v2	0	0	1	0	0	0
v3	0	0	0	0	1	0
v4	0	0	0	0	1	0
v5	0	0	0	0	0	1
v6	0	0	0	0	0	0

Matrix 11.1: Cleaver 1981, Model One - weighted matrix

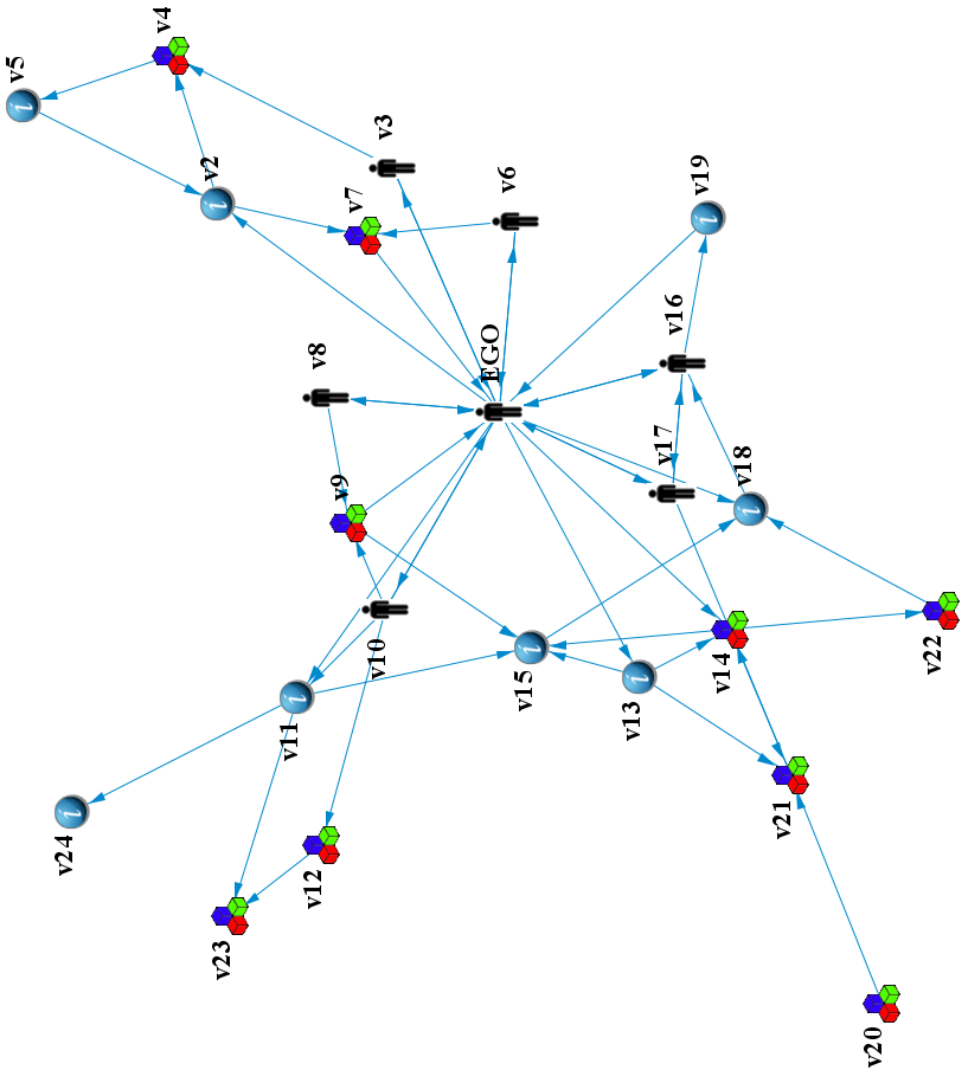


Visualisation 11.2: Cleaver 1981, Model Two - vertext count=7, link count=7, density=0.167

	EGO	v2	v3	v4	v5	v6	v7
EGO	0	0	1	1	1	1	1
v2	0	0	0	1	1	0	0
v3	0	0	0	0	0	0	0
v4	0	0	0	0	0	0	0
v5	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0

Matrix 11.2: Cleaver 1981, Model Two - binary matrix

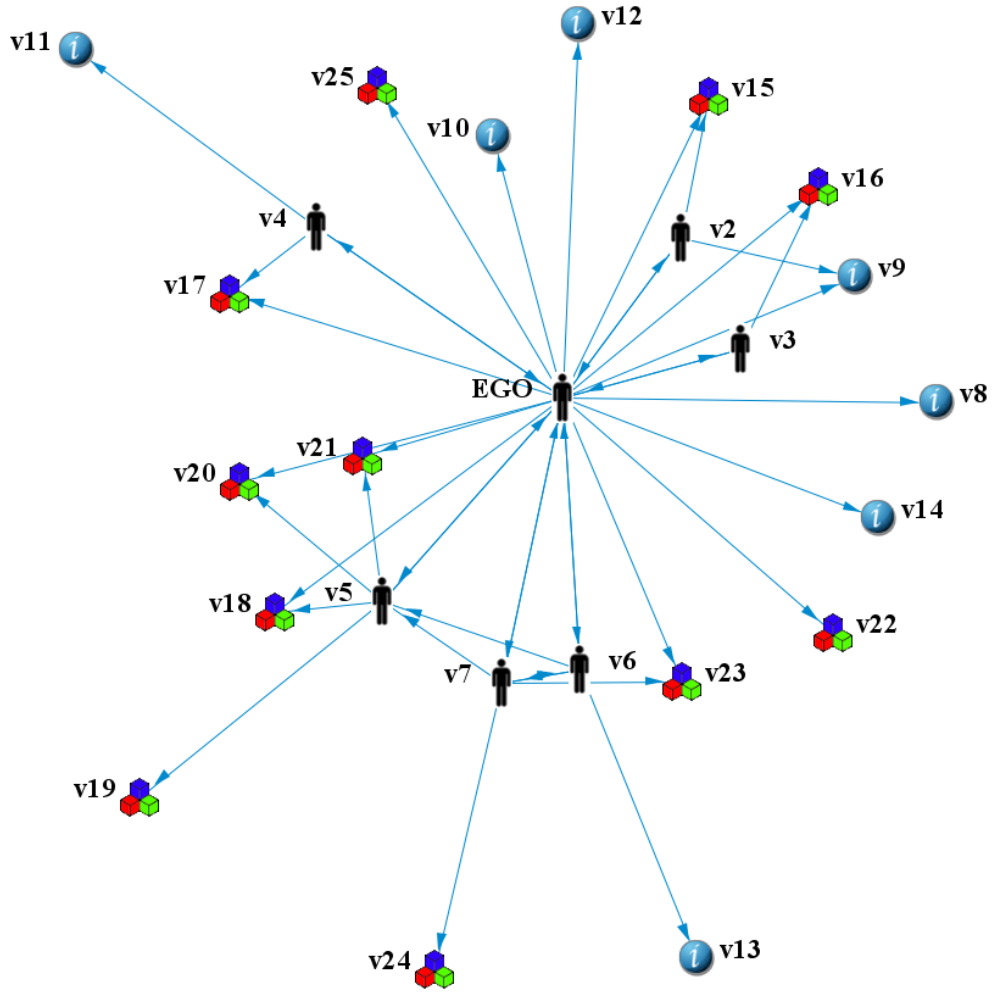
12. Cohn 1989



Visualisation 12.1: Cohn 1989, Model One - vertex count=24, link count=49, density=0.089

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19	v20	v21	v22	v23	v24
EGO	0	2	2	0	0	1	0	1	0	2	1	0	1	1	0	1	1	1	0	0	0	0	0	0
v2	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v3	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v4	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v5	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v6	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
v10	2	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
v16	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
v17	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
v19	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v21	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
v22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
v23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 12.1: Cohn 1989, Model One - weighted matrix

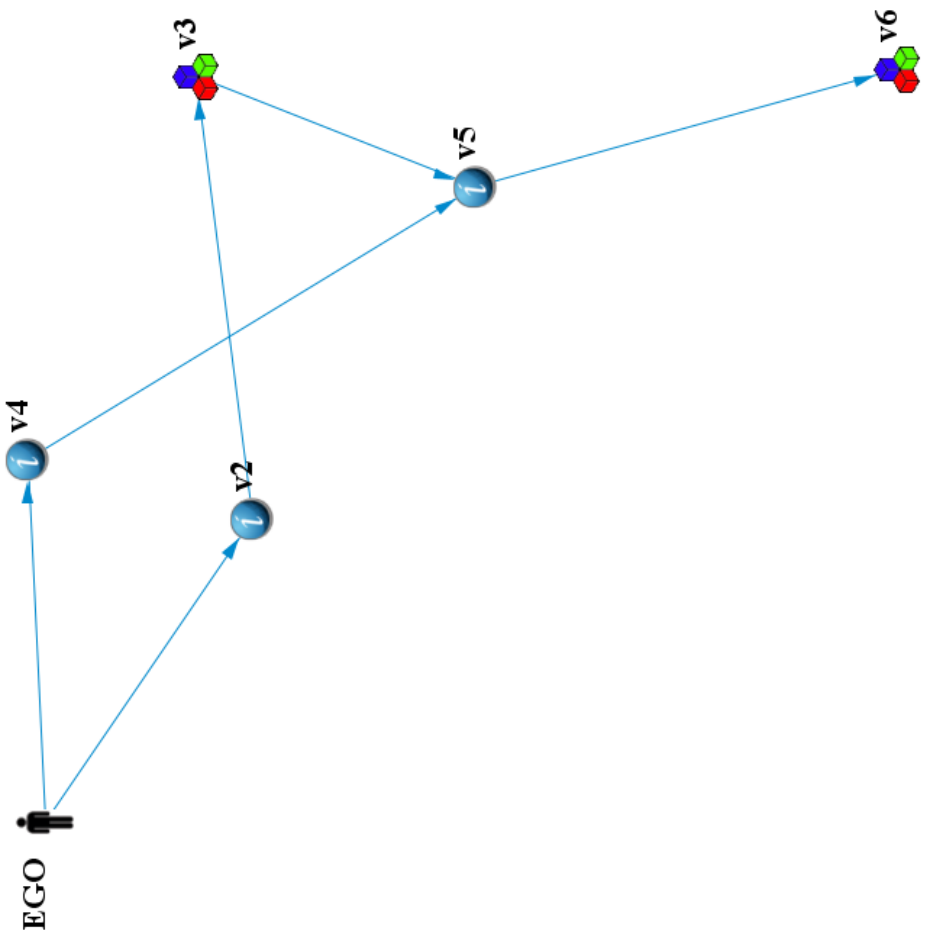


Visualisation 12.2: Cohn 1989, Model Two - vertext count=25, link count=42, density=0.07*0*

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19	v20	v21	v22	v23	v24	v25
EGO	0	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	0	1	1	1	1	0	1
v2	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
v3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
v4	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
v5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0
v6	1	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
v7	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
v8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 12.2: Cohn 1989, Model Two - binary matrix

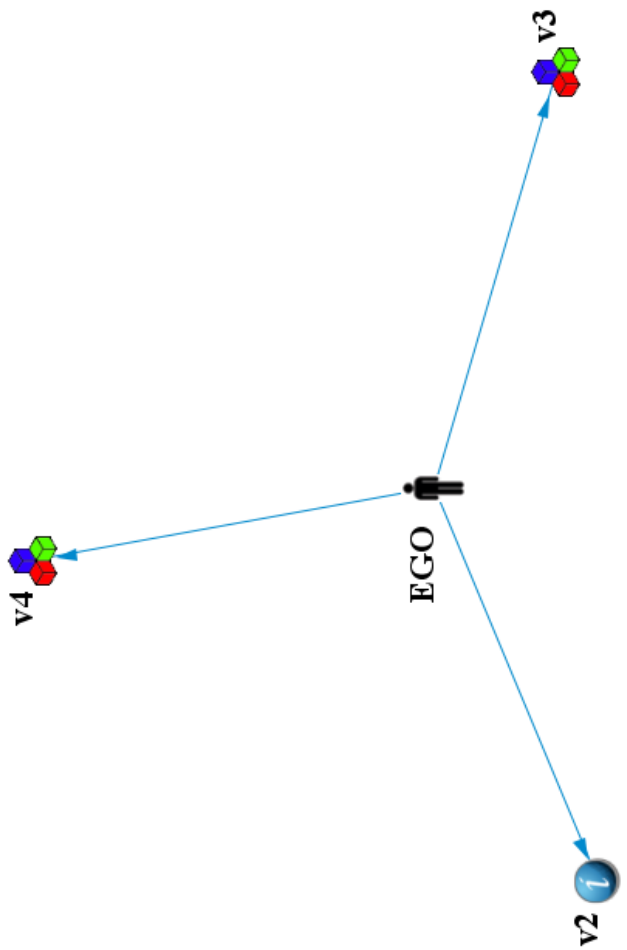
13. Dicke 1980



Visualisation 13.1: Dicke 1980, Model One - vertex count=6, link count=6, density=0.20*0*

	EGO	v2	v3	v4	v5	v6
EGO	0	1	0	1	0	0
v2	0	0	1	0	0	0
v3	0	0	0	0	1	0
v4	0	0	0	0	1	0
v5	0	0	0	0	0	1
v6	0	0	0	0	0	0

Matrix 13.1: Dicke 1980, Model One - weighted matrix

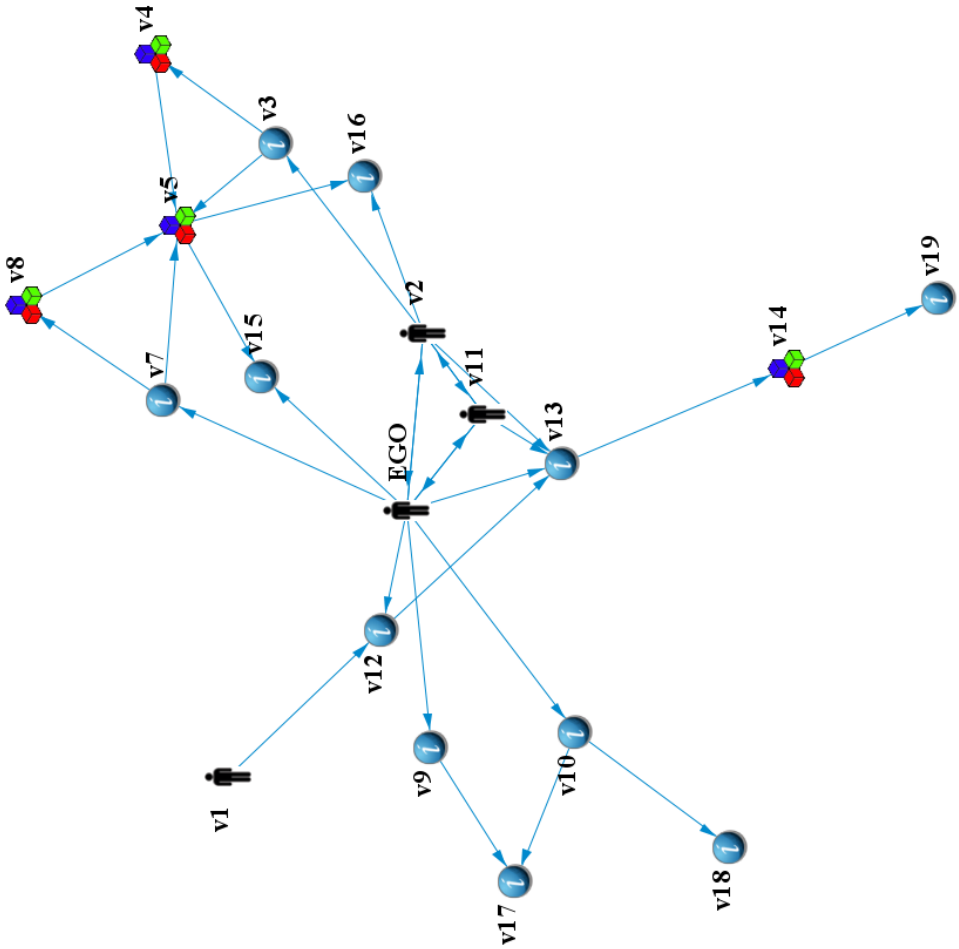


Visualisation 13.2: Dicke 1980, Model Two - vertext count=4, link count=3, density=0.25$0$

	EGO	v2	v3	v4
EGO	0	1	1	1
v2	0	0	0	0
v3	0	0	0	0
v4	0	0	0	0

Matrix 13.2: Dicke 1980, Model Two - binary matrix

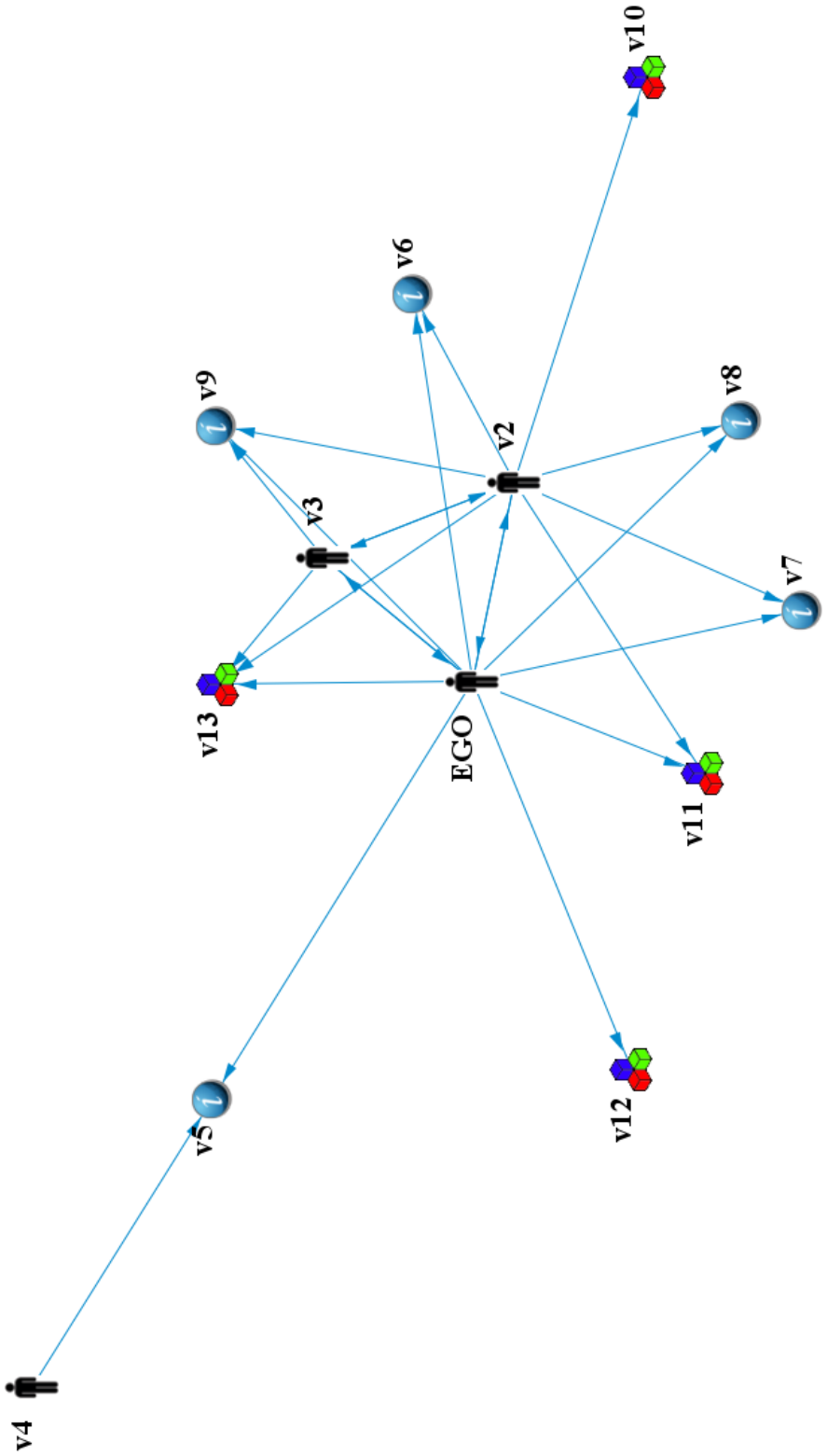
14. Ey 1989



Visualisation 14.1: Ey 1989, Model One - vertex count=19, link count=31, density=0.09

	v1	v2	v3	v4	v5	EGO	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19
v1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
v2	0	0	1	0	0	2	0	0	0	0	1	0	1	0	0	1	0	0	0
v3	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v4	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
EGO	0	2	0	0	0	0	1	0	1	1	1	1	1	0	1	0	0	0	0
v7	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
v11	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 14.1: Ey 1989, Model One - weighted matrix

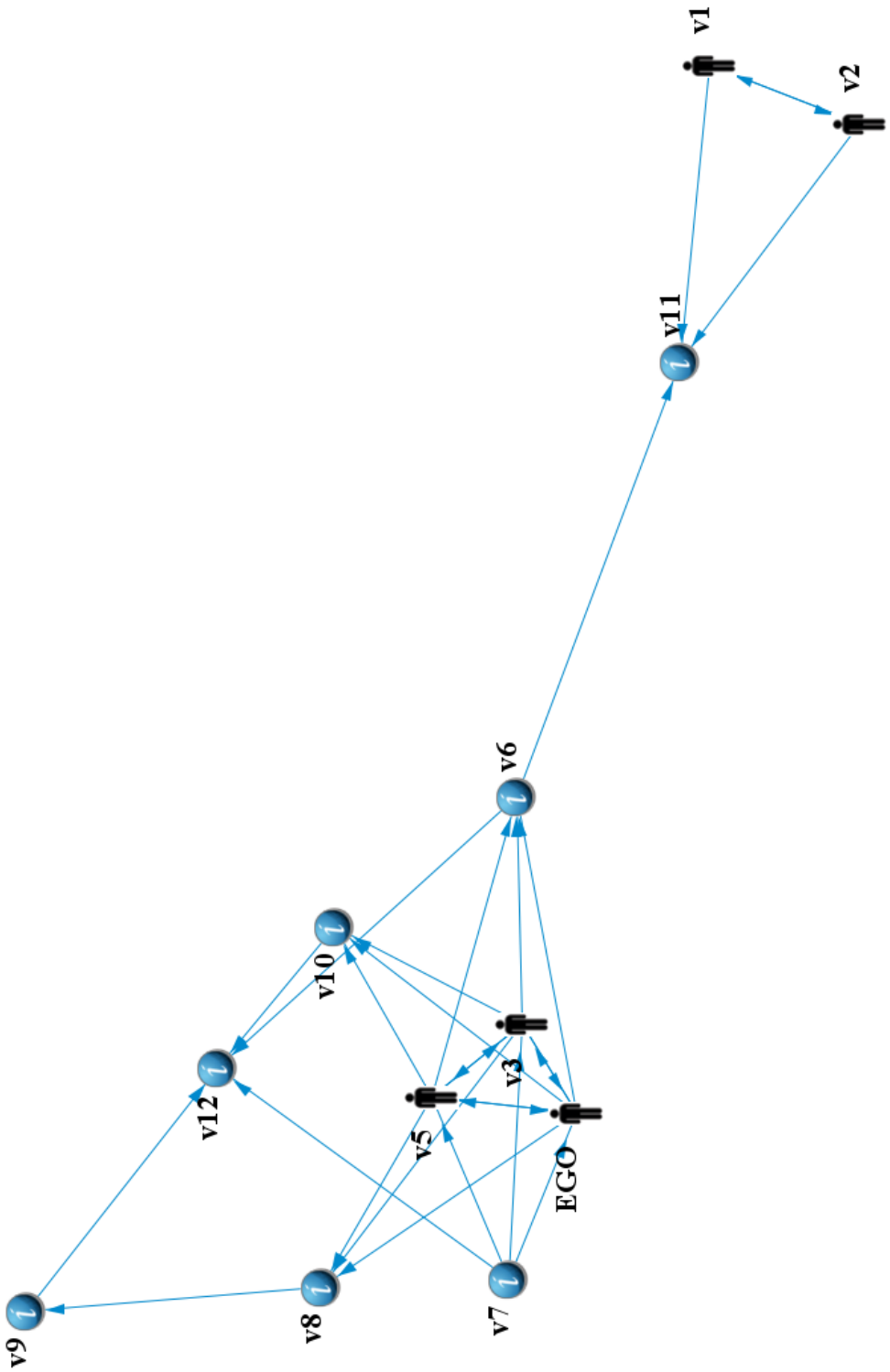


Visualisation 14.2: Ey 1989, Model Two - vertext count=13, link count=24, density=0.154

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13
EGO	0	1	1	0	1	1	1	1	1	0	1	1	1
v2	1	0	1	0	0	1	1	1	1	1	1	0	1
v3	1	1	0	0	0	0	0	0	1	0	0	0	1
v4	0	0	0	0	1	0	0	0	0	0	0	0	0
v5	0	0	0	0	0	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 14.2: Ey 1989, Model Two - binary matrix

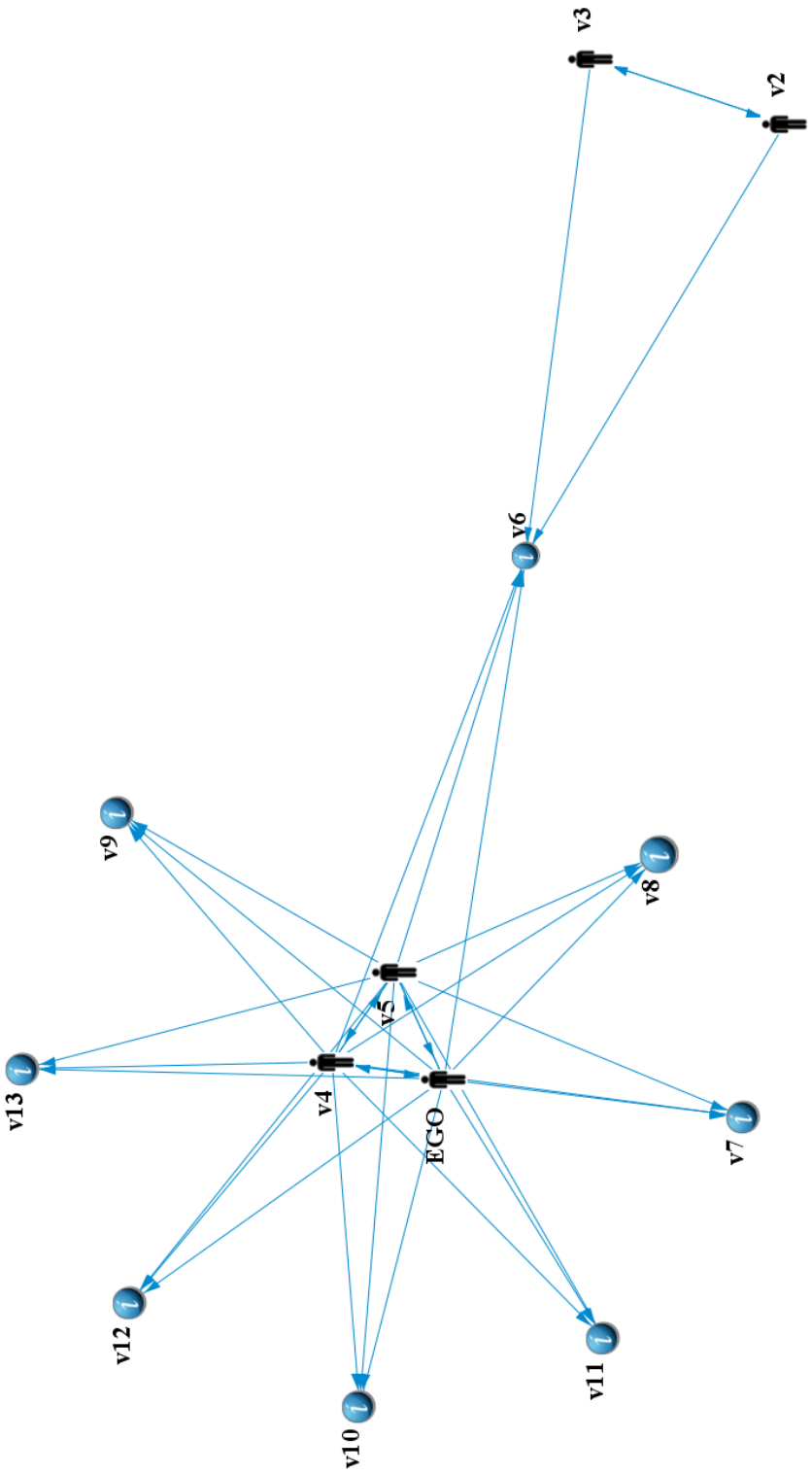
15. Field 1984



Visualisation 15.1: Field 1984, Model One - vertex count=12, link count=28, density=0.212

	v1	v2	v3	EGO	v5	v6	v7	v8	v9	v10	v11	v12
v1	0	1	0	0	0	0	0	0	0	0	1	0
v2	1	0	0	0	0	0	0	0	0	0	1	0
v3	0	0	0	2	2	1	0	1	0	1	0	0
EGO	0	0	2	0	2	1	0	1	0	1	0	0
v5	0	0	2	2	0	1	0	1	0	1	0	0
v6	0	0	0	0	0	0	0	0	0	0	1	1
v7	0	0	1	1	1	0	0	0	0	0	0	1
v8	0	0	0	0	0	0	0	0	1	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	1
v10	0	0	0	0	0	0	0	0	0	0	0	1
v11	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 15.1: Field 1984, Model One - weighted matrix

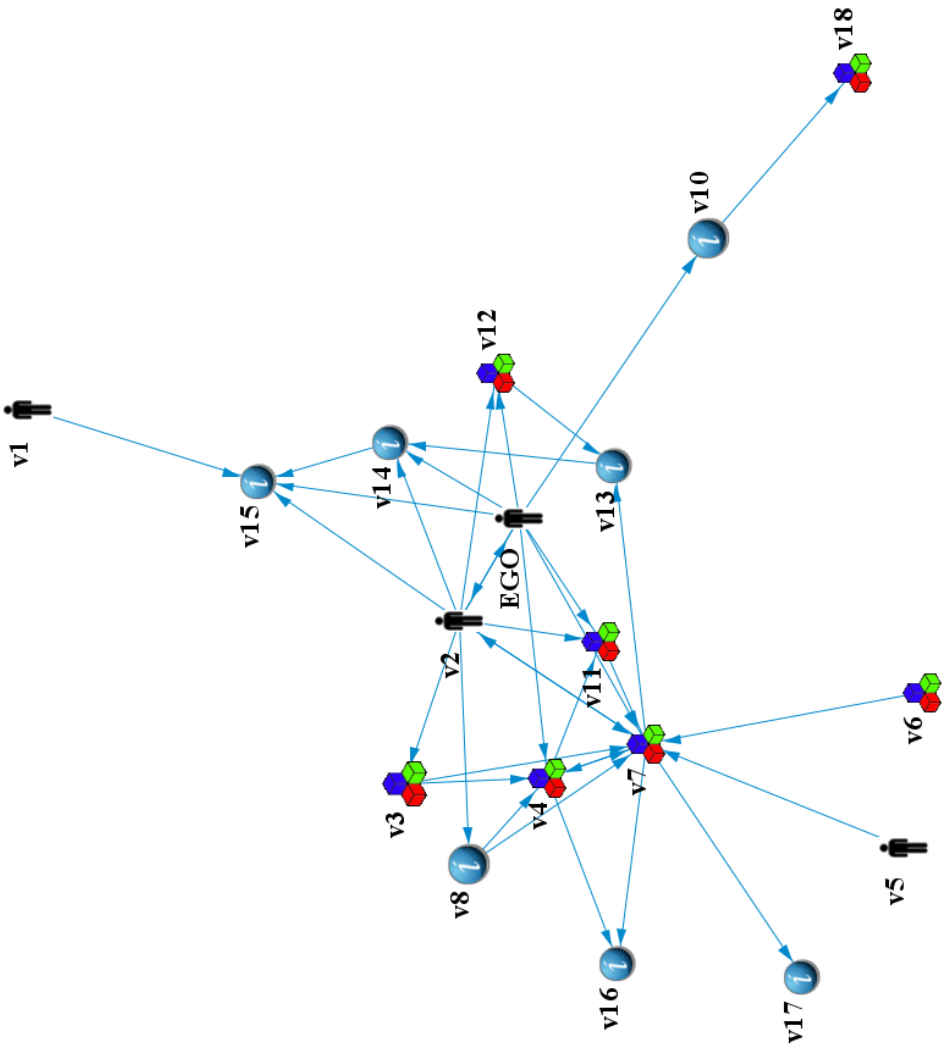


Visualisation 15.2: Field 1984, Model Two - vertext count=13, link count=34, density=0.218

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13
EGO	0	0	0	1	1	1	1	1	1	1	1	1	1
v2	0	0	1	0	0	1	0	0	0	0	0	0	0
v3	0	1	0	0	0	1	0	0	0	0	0	0	0
v4	1	0	0	0	1	1	1	1	1	1	1	1	1
v5	1	0	0	1	0	1	1	1	1	1	1	1	1
v6	0	0	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 15.2: Field 1984, Model Two - binary matrix

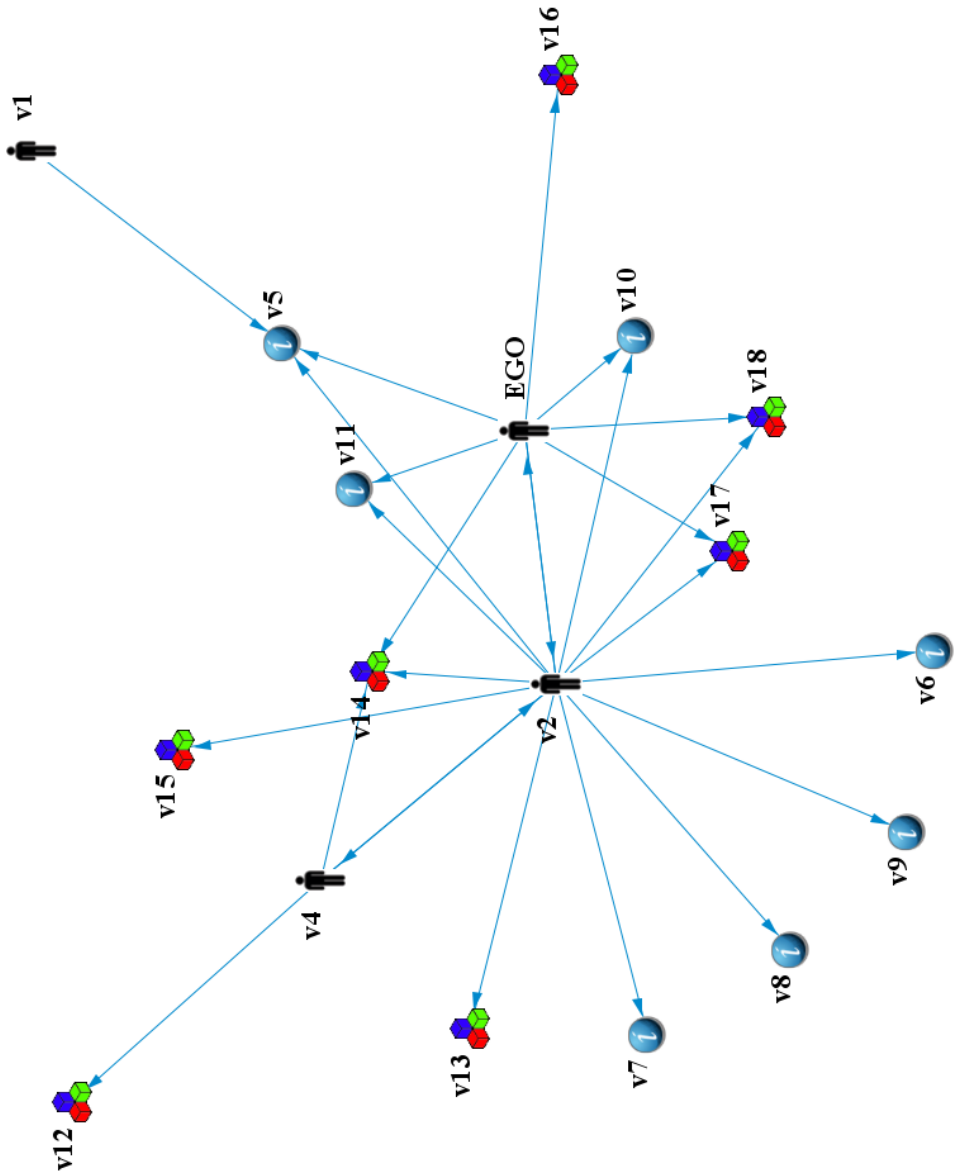
16. Fitzgerald 1980



Visualisation 16.1: Fitzgerald 1980, Model One - vertex count=18, link count=36, density=0.118

	v1	v2	v3	v4	v5	EGO	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18
v1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v2	0	0	2	0	0	0	1	1	4	0	1	1	0	1	1	0	0	0
v3	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
v4	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	2	0	0
v5	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
v7	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	1	0
v8	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
EGO	0	5	0	1	0	0	1	0	0	1	1	1	0	1	1	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v11	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 16.1: Fitzgerald 1980, Model One - weighted matrix

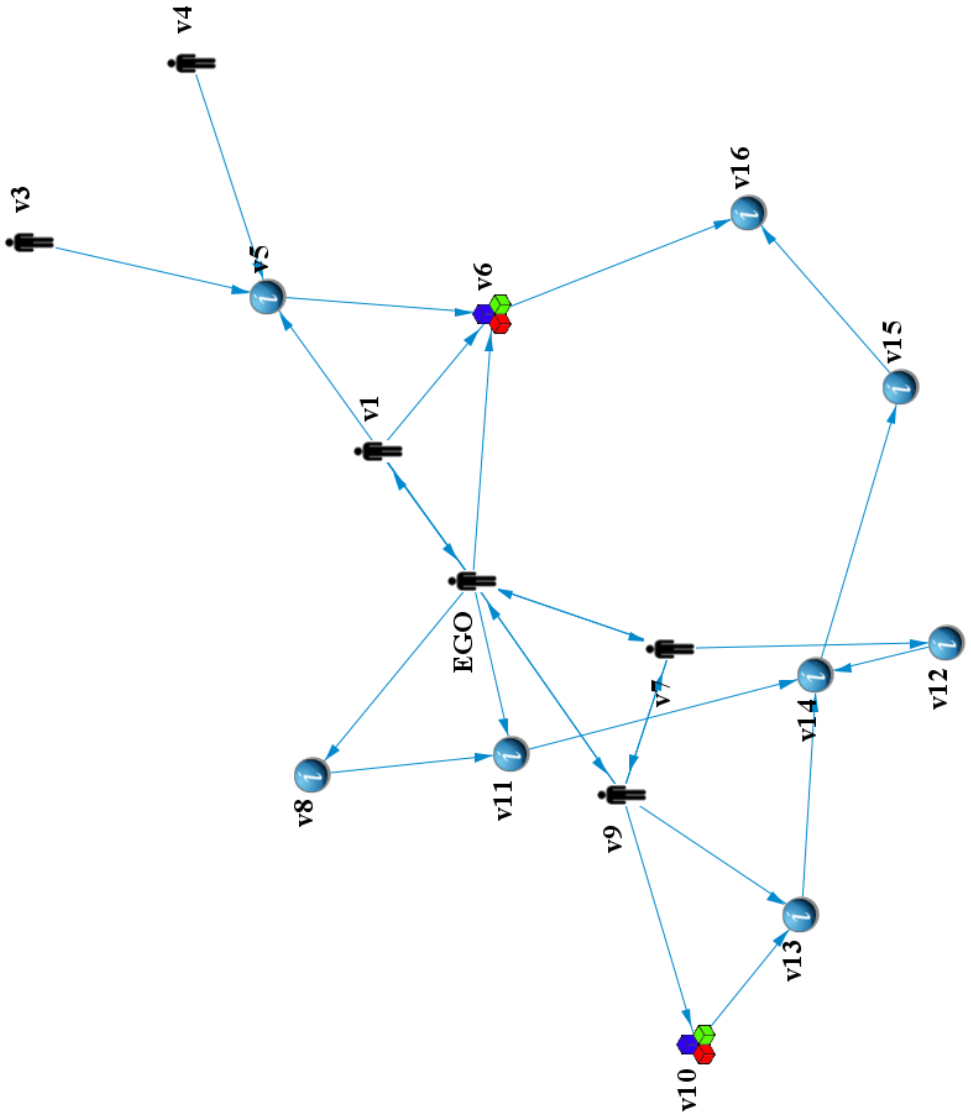


Visualisation 16.2: Fitzgerald 1980, Model Two - vertext count=18, link count=26, density=0.085

	v1	v2	v3	v4	v5	EGO	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18
v1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
v2	0	0	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1
EGO	0	1	0	0	1	0	0	0	0	1	1	0	0	1	0	1	1	1
v4	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
v5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 16.2: Fitzgerald 1980, Model Two - binary matrix

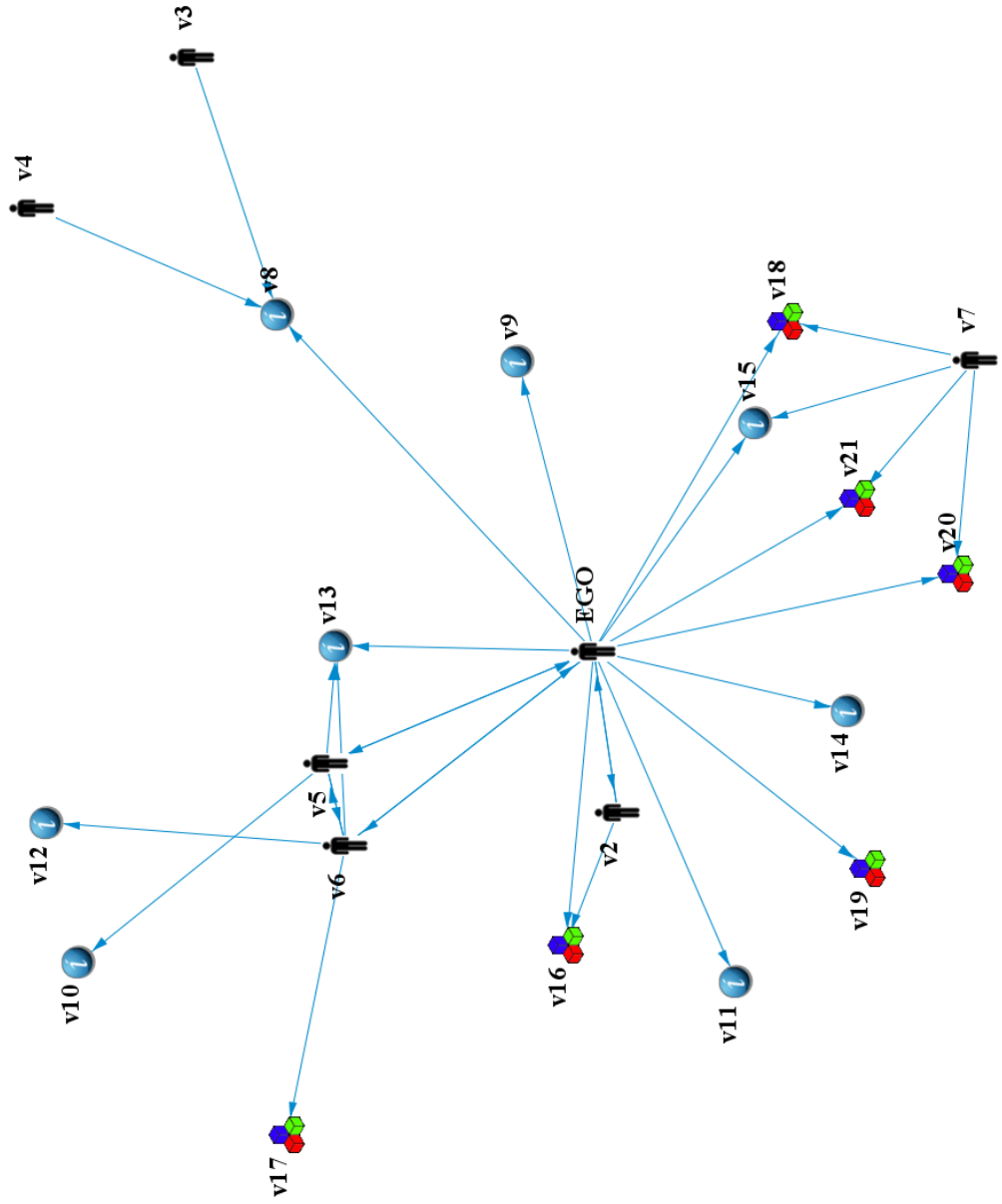
17. Fogg 1989



Visualisation 17.1: Fogg 1989, Model One - vertex count=16, link count=27, density=0.11[3]

	v1	EGO	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16
v1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
EGO	1	0	0	0	1	1	1	1	1	0	1	0	0	0	0	0
v3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
v4	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
v5	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v7	0	1	0	0	0	0	0	0	1	0	0	2	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v9	0	1	0	0	0	0	1	0	0	1	0	0	1	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 17.1: Fogg 1989, Model One - weighted matrix

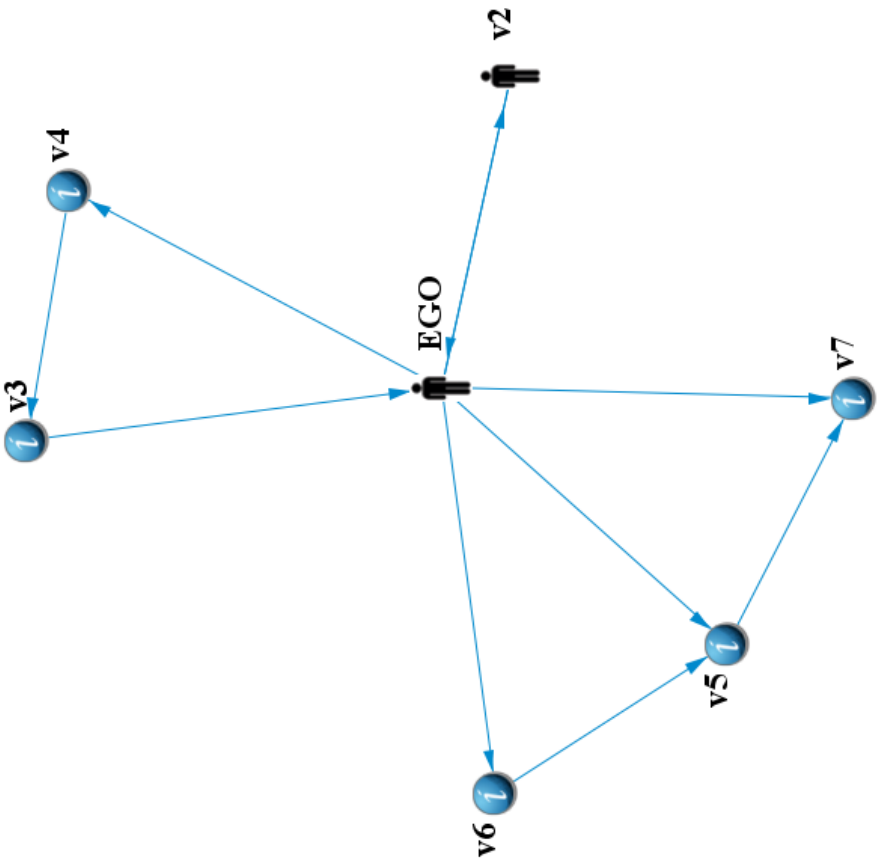


Visualisation 17.2: Fogg 1989, Model Two - vertext count=21, link count=31, density=0.07$_4$

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19	v20	v21
EGO	0	1	0	0	1	1	0	1	1	0	1	0	1	1	1	1	0	1	1	1	1
v2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
v4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
v5	1	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
v6	1	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1
v8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 17.2: Fogg 1989, Model Two - binary matrix

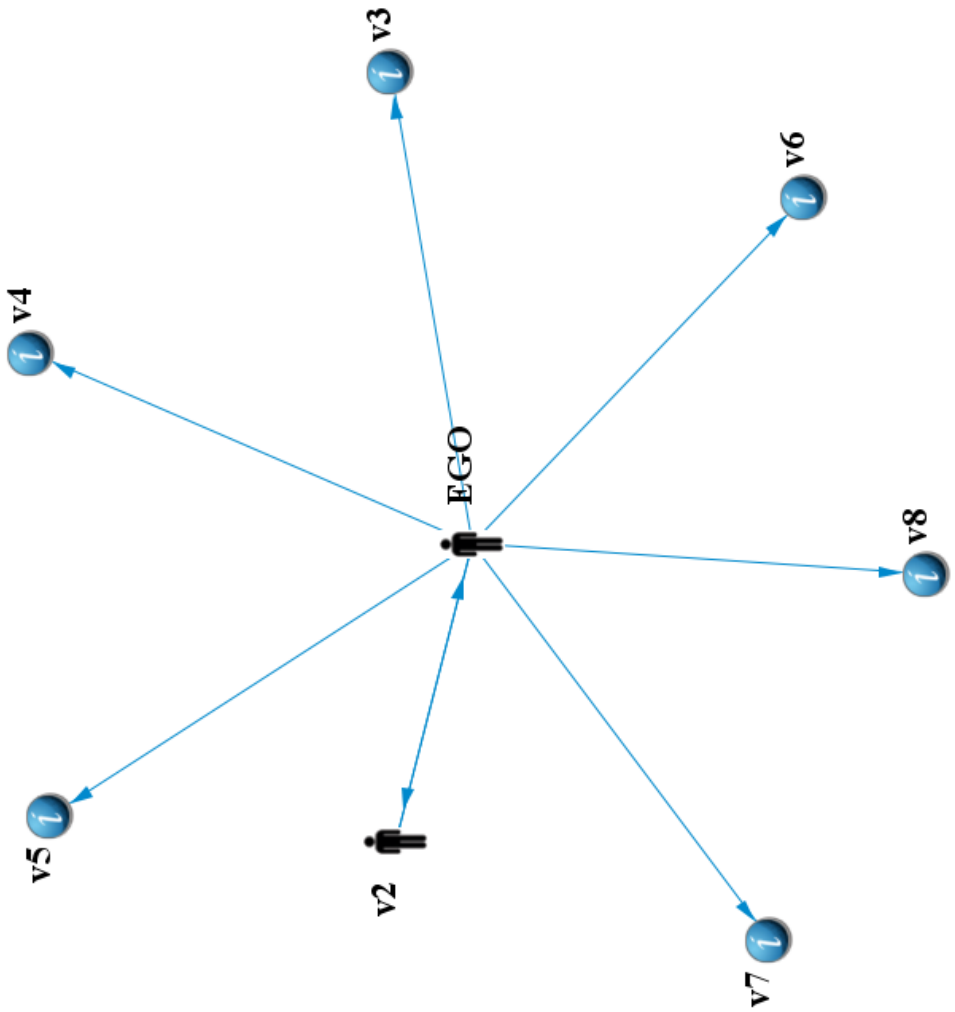
18. Galanter 1983



Visualisation 18.1: Galanter 1983, Model One - vertex count=7, link count=10, density=0.23*8*

	EGO	v2	v3	v4	v5	v6	v7
EGO	0	1	0	1	1	1	1
v2	1	0	0	0	0	0	0
v3	1	0	0	0	0	0	0
v4	0	0	1	0	0	0	0
v5	0	0	0	0	0	0	1
v6	0	0	0	0	1	0	0
v7	0	0	0	0	0	0	0

Matrix 18.1: Galanter 1983, Model One - weighted matrix

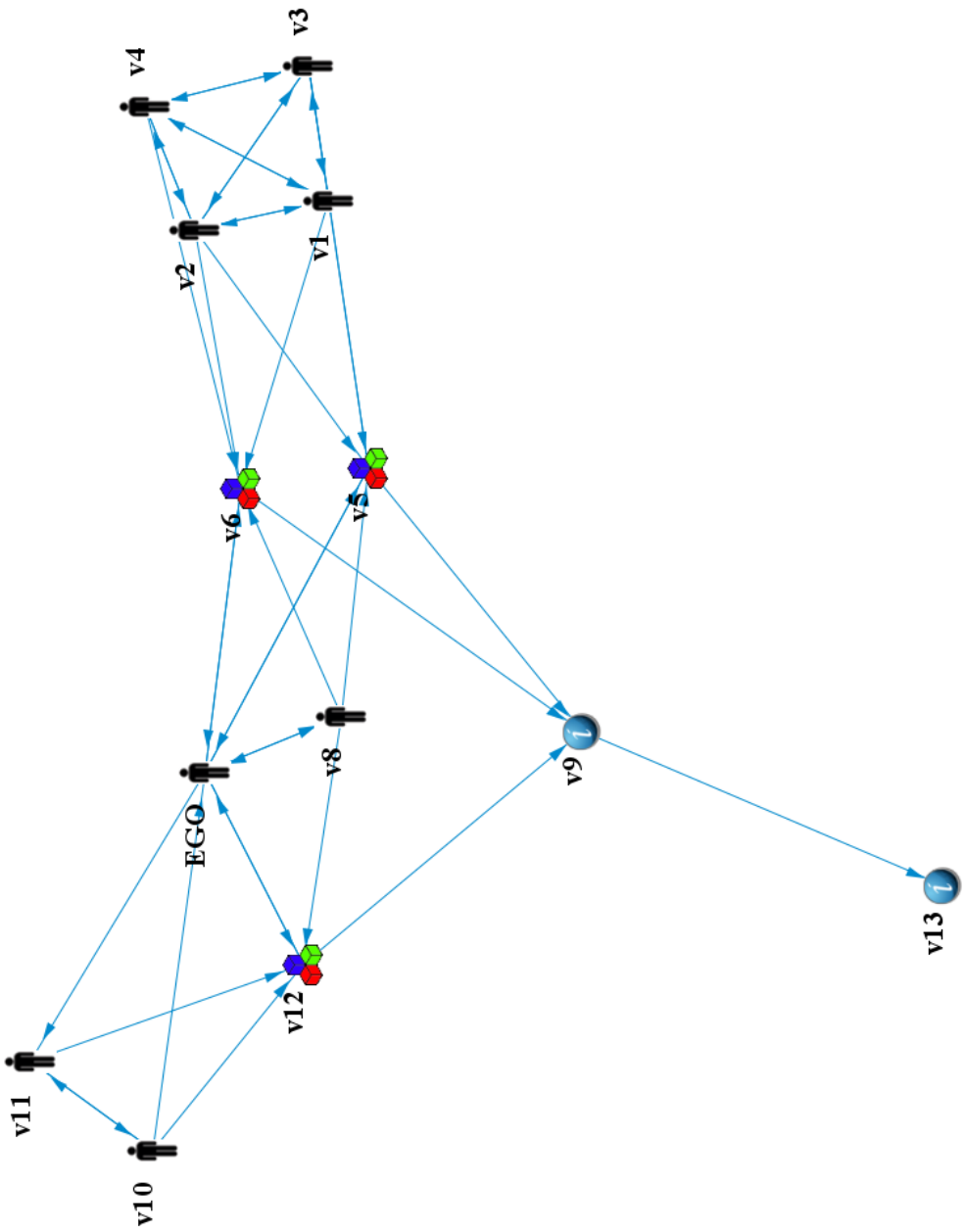


Visualisation 18.2: Galanter 1983, Model Two - vertext count=8, link count=8, density=0.143

	EGO	v2	v3	v4	v5	v6	v7	v8
EGO	0	1	1	1	1	1	1	1
v2	1	0	0	0	0	0	0	0
v3	0	0	0	0	0	0	0	0
v4	0	0	0	0	0	0	0	0
v5	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0

Matrix 18.2: Galanter 1983, Model Two - binary matrix

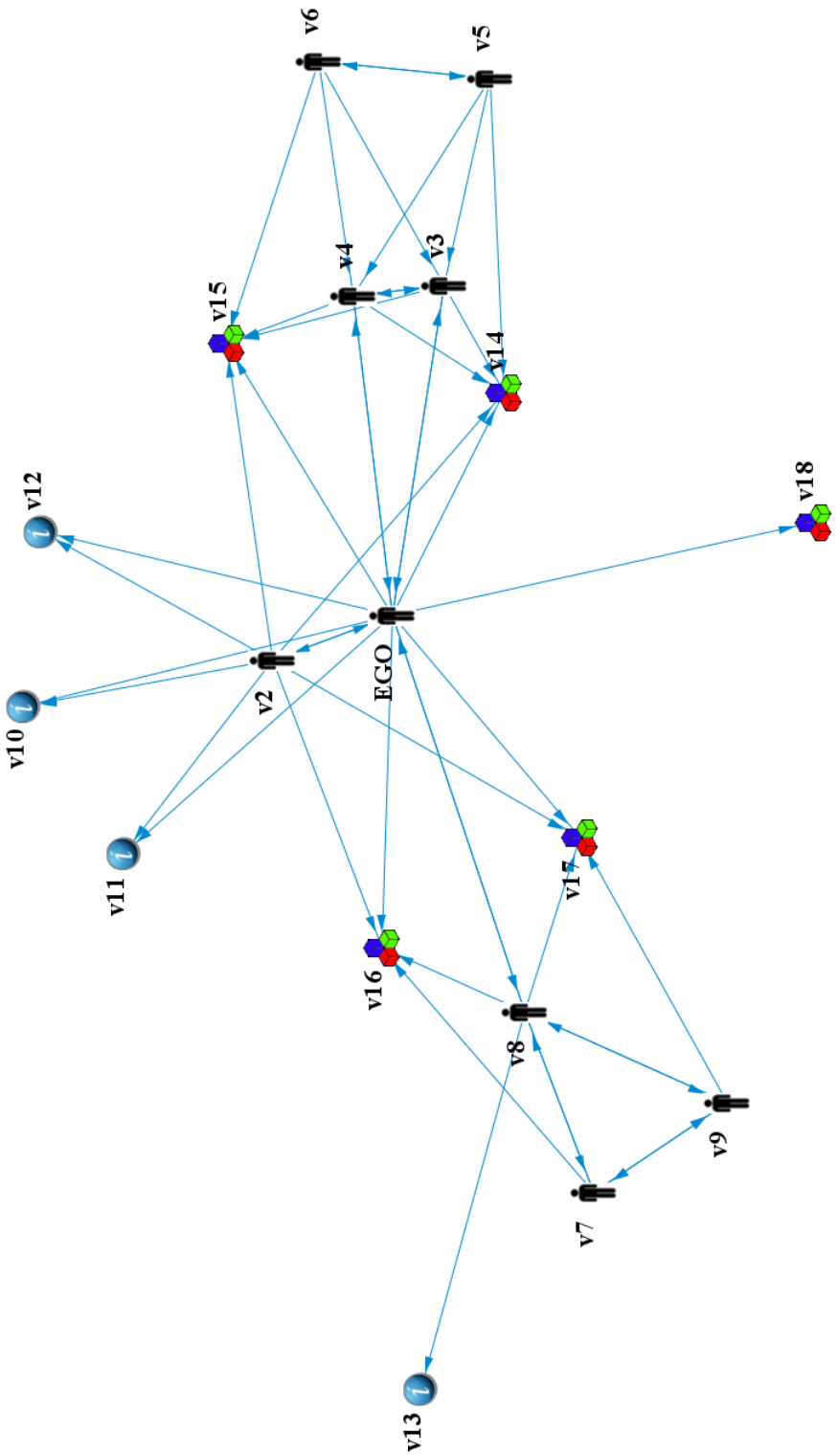
19. Giblett 1982



Visualisation 19.1: Giblett 1982, Model One - vertex count=13, link count=39, density=0.25*0*

	v1	v2	v3	v4	v5	v6	EGO	v8	v9	v10	v11	v12	v13
v1	0	1	1	1	1	1	0	0	0	0	0	0	0
v2	1	0	1	1	1	1	0	0	0	0	0	0	0
v3	1	1	0	1	1	0	0	0	0	0	0	0	0
v4	1	1	1	0	0	1	0	0	0	0	0	0	0
v5	0	0	0	0	0	0	1	0	1	0	0	0	0
v6	0	0	0	0	0	0	1	0	1	0	0	0	0
EGO	0	0	0	0	1	1	0	2	0	0	1	1	0
v8	0	0	0	0	1	1	2	0	0	0	0	1	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	2
v10	0	0	0	0	0	0	1	0	0	0	1	1	0
v11	0	0	0	0	0	0	0	0	0	2	0	1	0
v12	0	0	0	0	0	0	1	0	1	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 19.1: Giblett 1982, Model One - weighted matrix

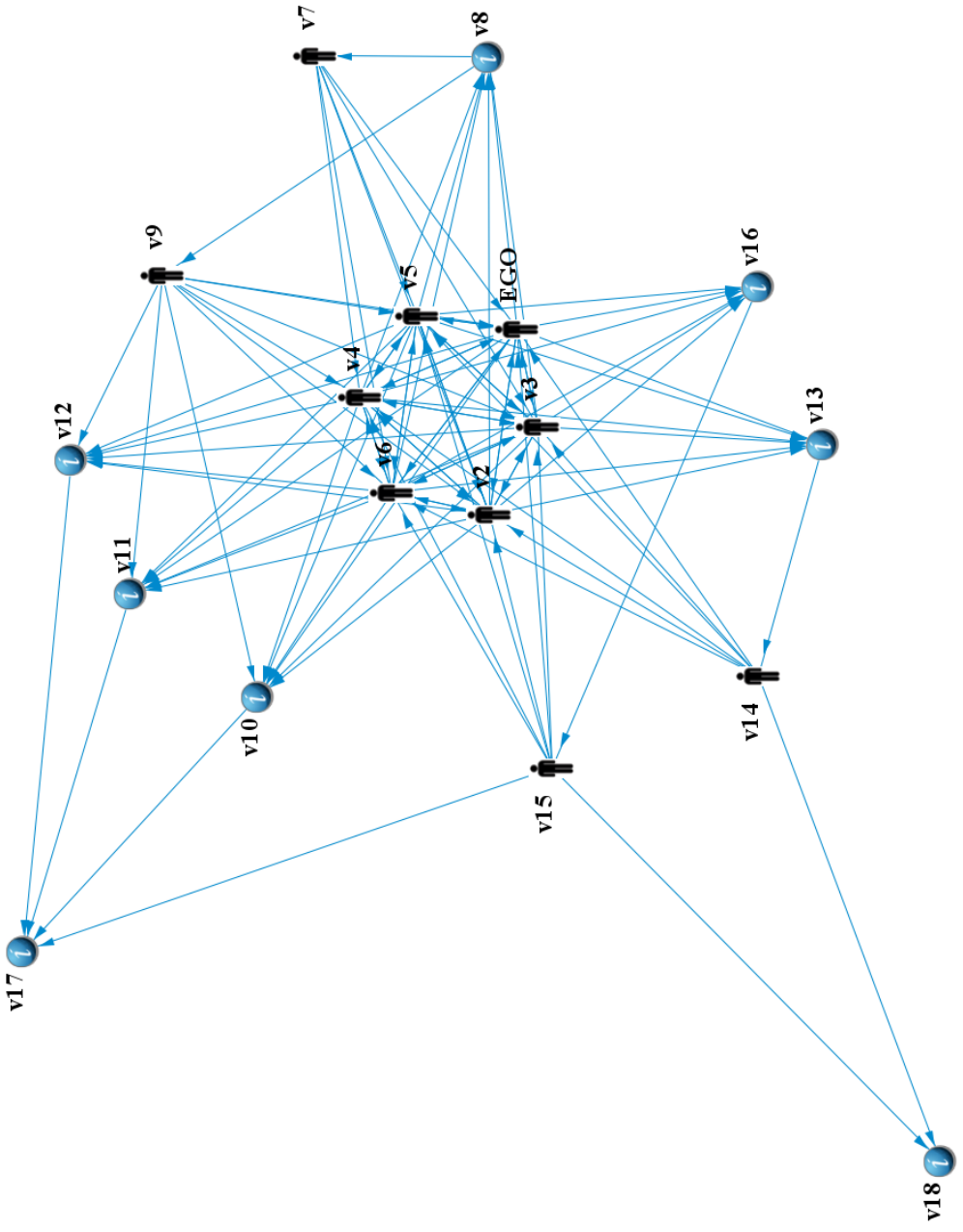


Visualisation 19.2: Giblett 1982, Model Two - vertext count=18, link count=48, density=0.157

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18
EGO	0	1	1	1	0	0	0	1	0	1	1	1	0	1	1	1	1	1
v2	1	0	0	0	0	0	0	0	0	1	1	1	0	1	1	1	1	0
v3	1	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0
v4	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
v5	0	0	1	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0
v6	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0
v7	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0
v8	1	0	0	0	0	0	1	0	1	0	0	0	1	0	0	1	1	0
v9	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 19.2: Giblett 1982, Model Two - binary matrix

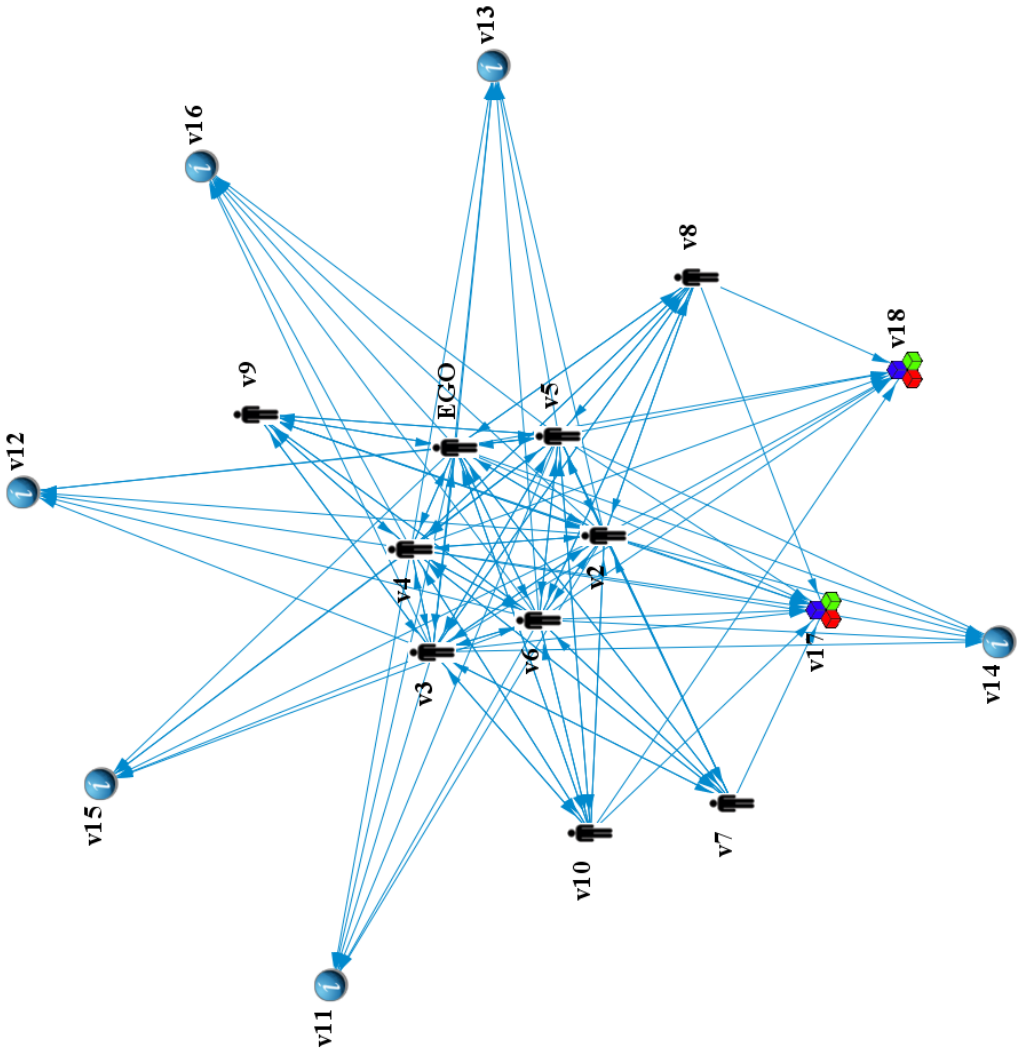
20. Gocke 1985



Visualisation 20.1: Gocke 1985, Model One - vertex count=18, link count=103, density=0.337

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18
EGO	0	5	5	5	5	5	0	2	0	1	1	1	1	0	0	1	0	0
v2	5	0	5	5	5	5	0	2	0	1	1	1	1	0	0	1	0	0
v3	5	5	0	5	5	5	0	2	0	1	1	1	1	0	0	1	0	0
v4	5	5	5	0	5	5	0	2	0	1	1	1	1	0	0	1	0	0
v5	5	5	5	5	0	5	0	2	0	1	1	1	1	0	0	1	0	0
v6	5	5	5	5	5	0	0	2	0	1	1	1	1	0	0	1	0	0
v7	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
v9	1	1	1	1	1	1	0	0	0	1	1	1	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
v14	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1
v15	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 20.1: Gocke 1985, Model One - weighted matrix

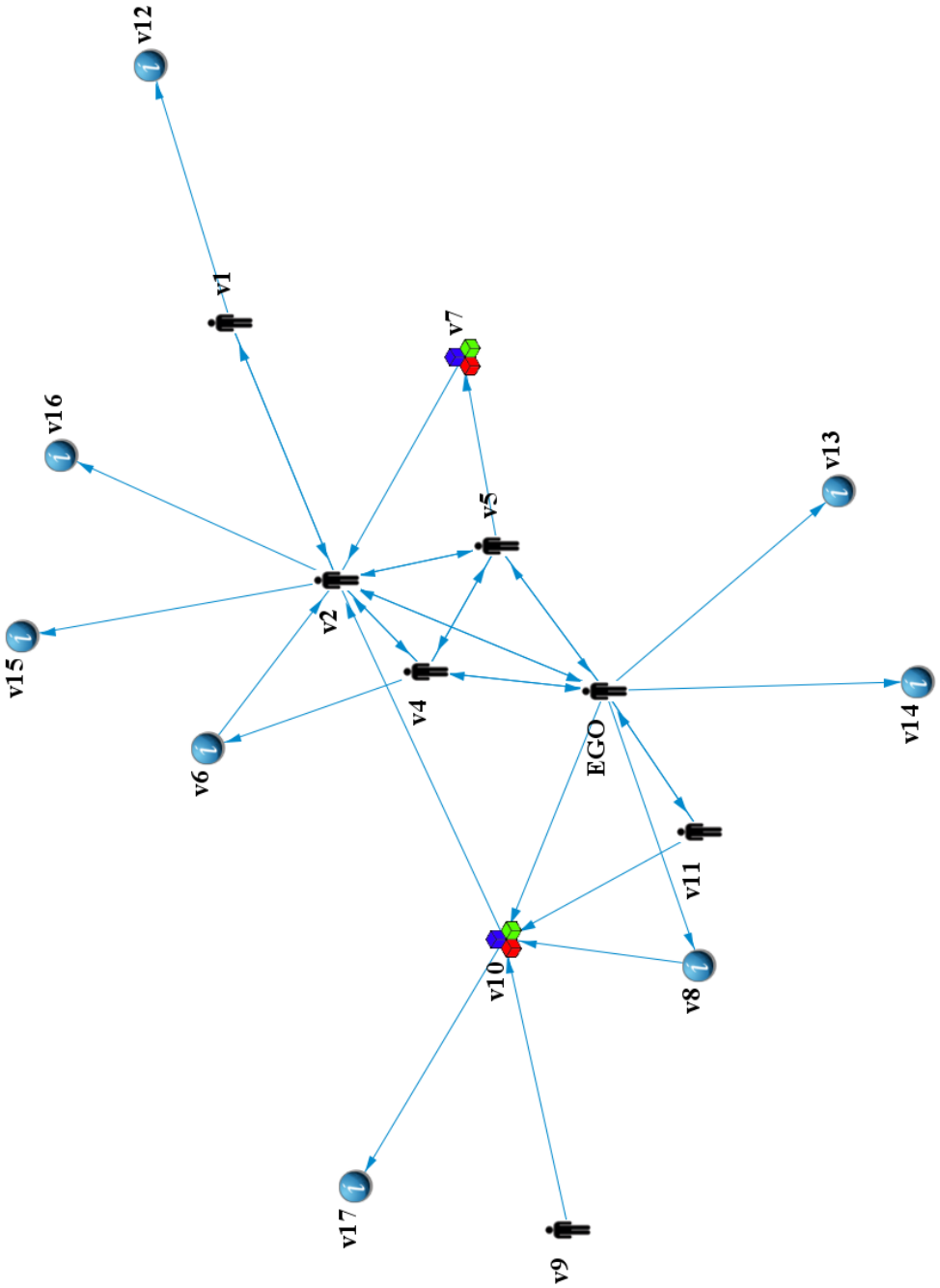


Visualisation 20.2: Gocke 1985, Model Two - vertexts count=18, link count=132, density=0.431

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18
EGO	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
v2	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
v3	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
v4	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
v5	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1
v6	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1
v7	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0
v8	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1
v9	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0
v10	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 20.2: Gocke 1985, Model Two - binary matrix

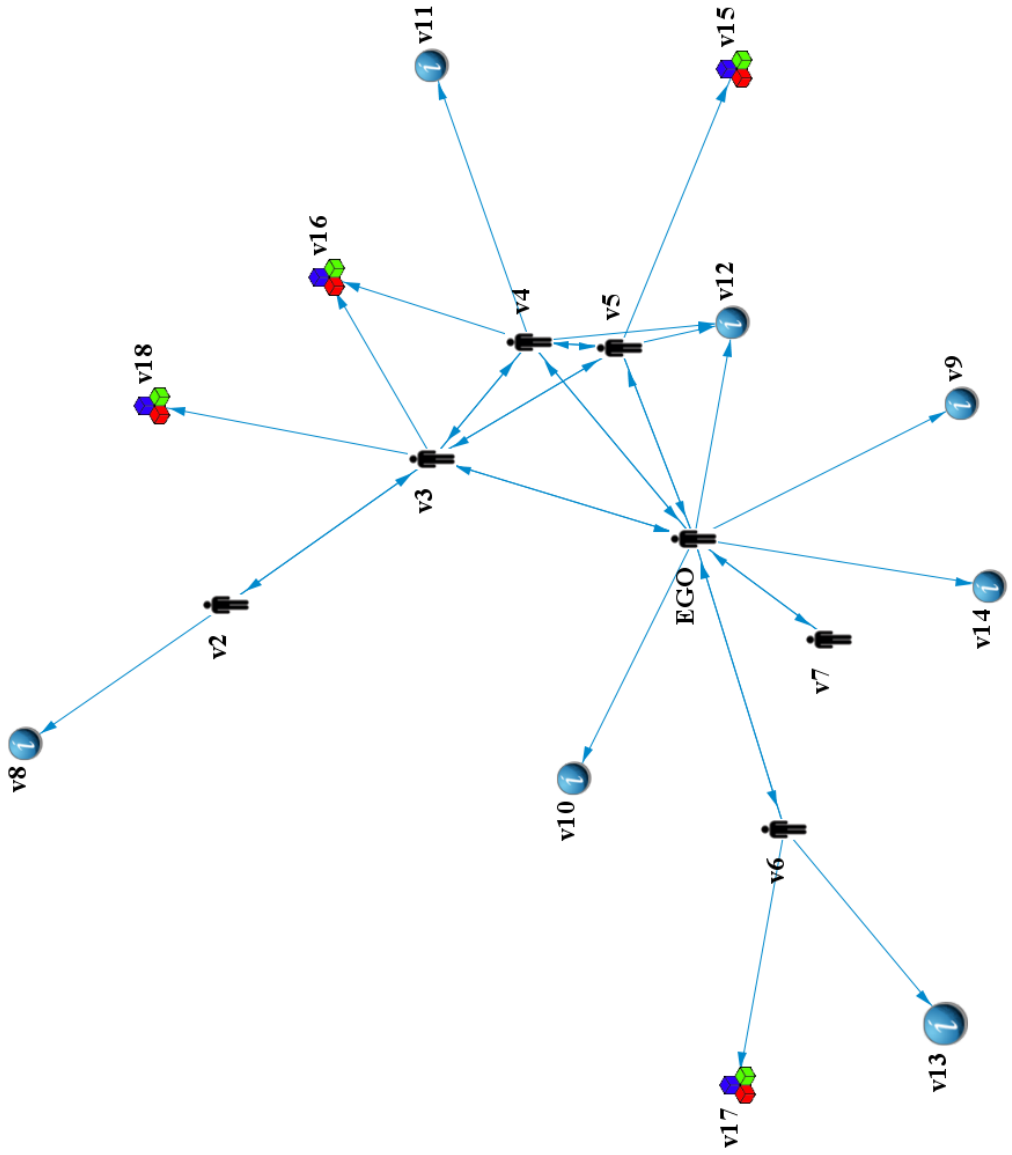
21. Gordon 1981



Visualisation 21.1: Gordon 1981, Model One - vertex count=17, link count=32, density=0.118

	v1	v2	EGO	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17
v1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v2	1	0	2	1	1	0	0	0	0	0	0	0	0	0	1	1	0
EGO	0	2	0	1	1	0	0	1	0	1	1	0	1	1	0	0	0
v4	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0
v5	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0
v6	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v7	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
v10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v11	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 21.1: Gordon 1981, Model One - weighted matrix

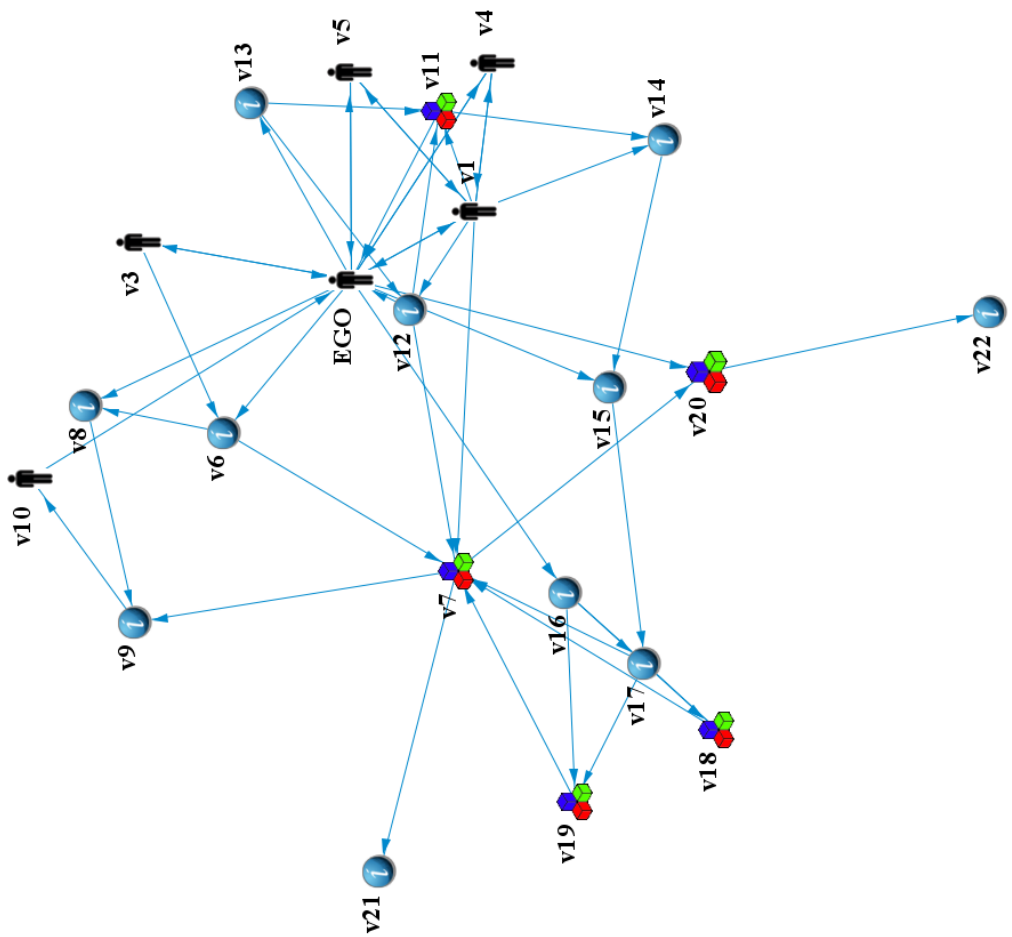


Visualisation 21.2: Gordon 1981, Model Two - vertext count=18, link count=32, density=0.10$_5$

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18
EGO	0	0	1	1	1	1	1	0	1	1	0	1	0	1	0	0	0	0
v2	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
v3	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	1
v4	1	0	1	0	1	0	0	0	0	0	1	1	0	0	0	1	0	0
v5	1	0	1	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0
v6	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
v7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 21.2: Gordon 1981, Model Two - binary matrix

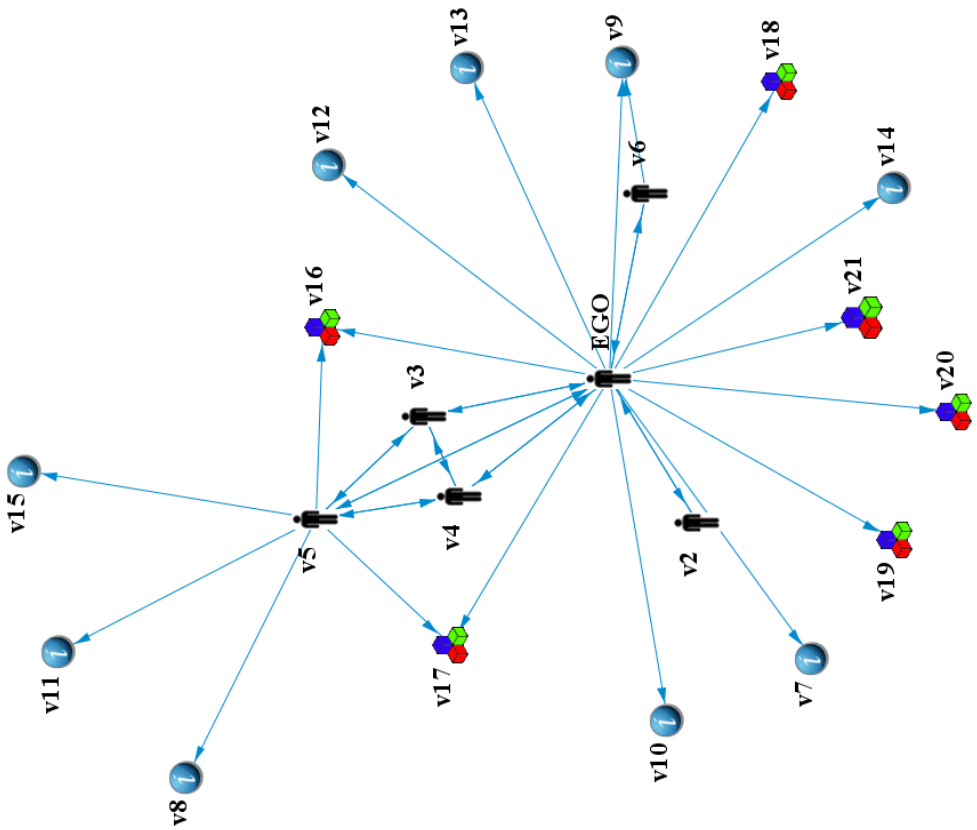
22. Graham 1988



Visualisation 22.1: Graham 1988, Model One - vertex count=22, link count=49, density=0.106

	v1	EGO	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19	v20	v21	v22
v1	0	2	0	1	1	0	1	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0
EGO	2	0	2	1	1	1	0	1	0	0	0	0	1	0	1	1	0	0	0	1	0	0
v3	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0
v8	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
v12	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
v17	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
v18	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v19	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 22.1: Graham 1988, Model One - weighted matrix

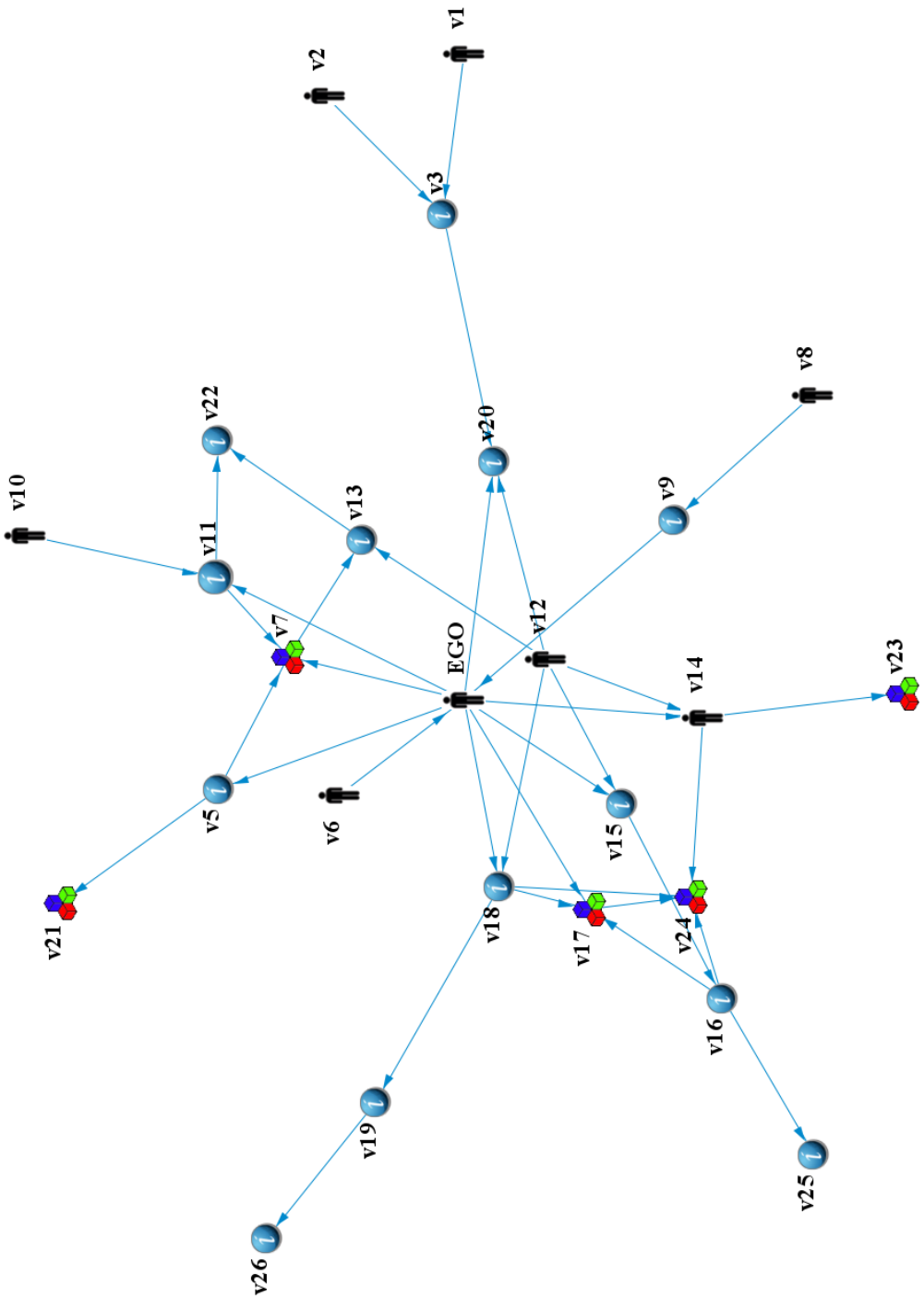


Visualisation 22.2: Graham 1988, Model Two - vertext count=21, link count=34, density=0.08*1*

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19	v20	v21
EGO	0	1	1	1	1	1	1	0	1	1	0	1	1	1	0	1	1	1	1	1	1
v2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v3	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v4	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v5	1	0	1	1	0	0	0	1	0	0	1	0	0	0	1	1	1	0	0	0	0
v6	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 22.2: Graham 1988, Model Two - binary matrix

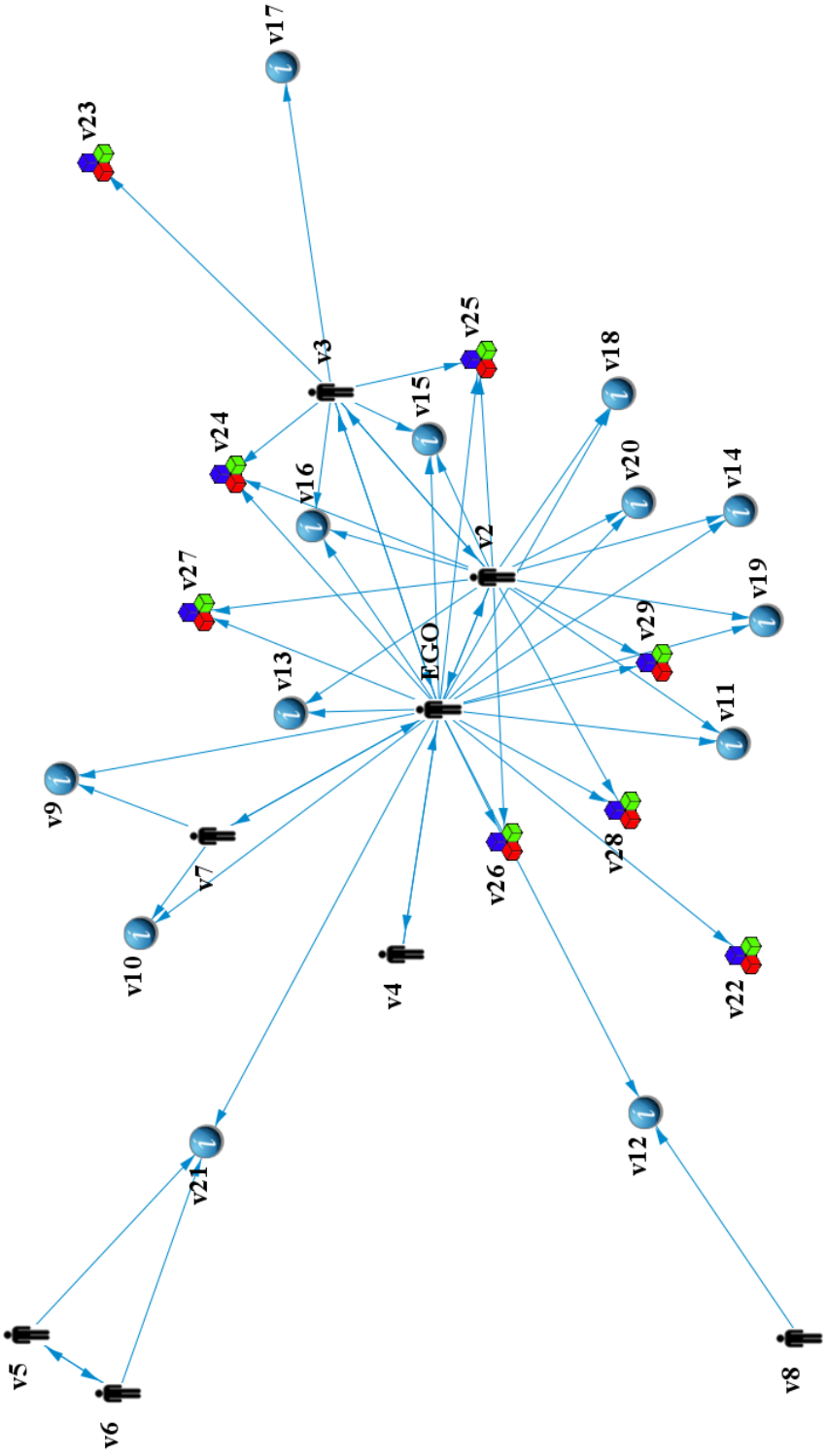
23. Greenwood 1977



Visualisation 23.1: Greenwood 1977, Model One - vertex count=26, link count=37, density=0.057

	v1	v2	v3	EGO	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19	v20	v21	v22	v23	v24	v25	v26
v1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
EGO	0	0	0	0	1	0	1	0	0	0	1	0	0	1	1	0	1	1	0	1	0	0	0	0	0	0
v5	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v6	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	0	1	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 23.1: Greenwood 1977, Model One - weighted matrix

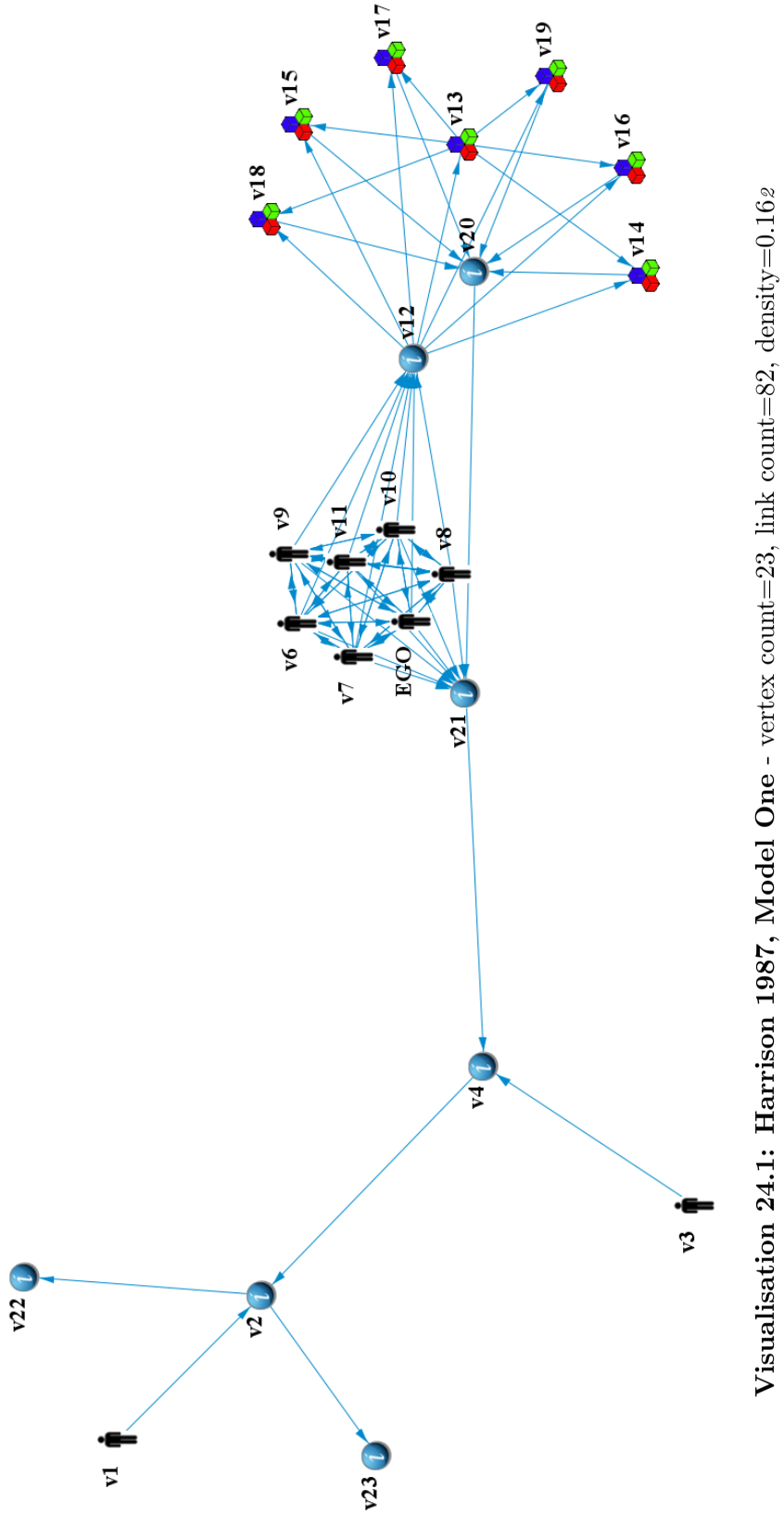


Visualisation 23.2: Greenwood 1977, Model Two - vertext count=29, link count=56, density=0.069

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19	v20	v21	v22	v23	v24	v25	v26	v27	v28	v29
EGO	0	1	1	1	0	0	1	0	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	1	1	1	1	1	1
v2	1	0	1	0	0	0	0	0	0	0	1	0	1	1	1	1	0	1	1	1	0	0	0	1	1	1	1	1	1
v3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1	1	1	0	0	0	0
v4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v5	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
v6	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
v7	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 23.2: Greenwood 1977, Model Two - binary matrix

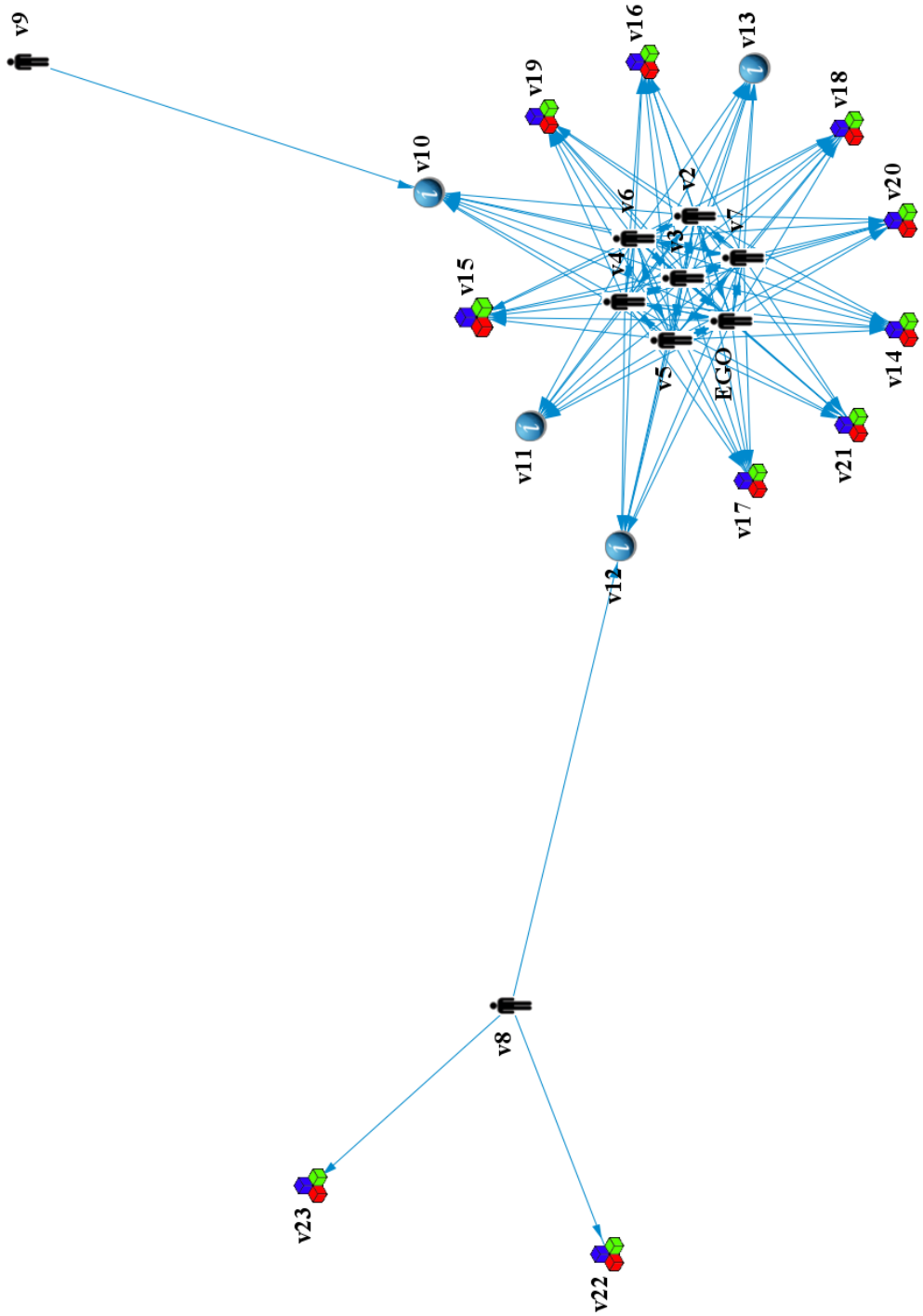
24. Harrison 1987



Visualisation 24.1: Harrison 1987, Model One - vertex count=23, link count=82, density=0.162

	v1	v2	v3	v4	EGO	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19	v20	v21	v22	v23
v1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
v3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EGO	0	0	0	0	0	2	2	2	2	2	2	1	0	0	0	0	0	0	0	0	1	0	0
v6	0	0	0	0	2	0	2	2	2	2	2	1	0	0	0	0	0	0	0	0	1	0	0
v7	0	0	0	0	2	2	0	2	2	2	2	1	0	0	0	0	0	0	0	0	1	0	0
v8	0	0	0	0	2	2	2	0	2	2	2	1	0	0	0	0	0	0	0	0	1	0	0
v9	0	0	0	0	2	2	2	2	0	2	2	1	0	0	0	0	0	0	0	0	1	0	0
v10	0	0	0	0	2	2	2	2	2	0	2	1	0	0	0	0	0	0	0	0	1	0	0
v11	0	0	0	0	2	2	2	2	2	2	0	1	0	0	0	0	0	0	0	0	1	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v21	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 24.1: Harrison 1987, Model One - weighted matrix

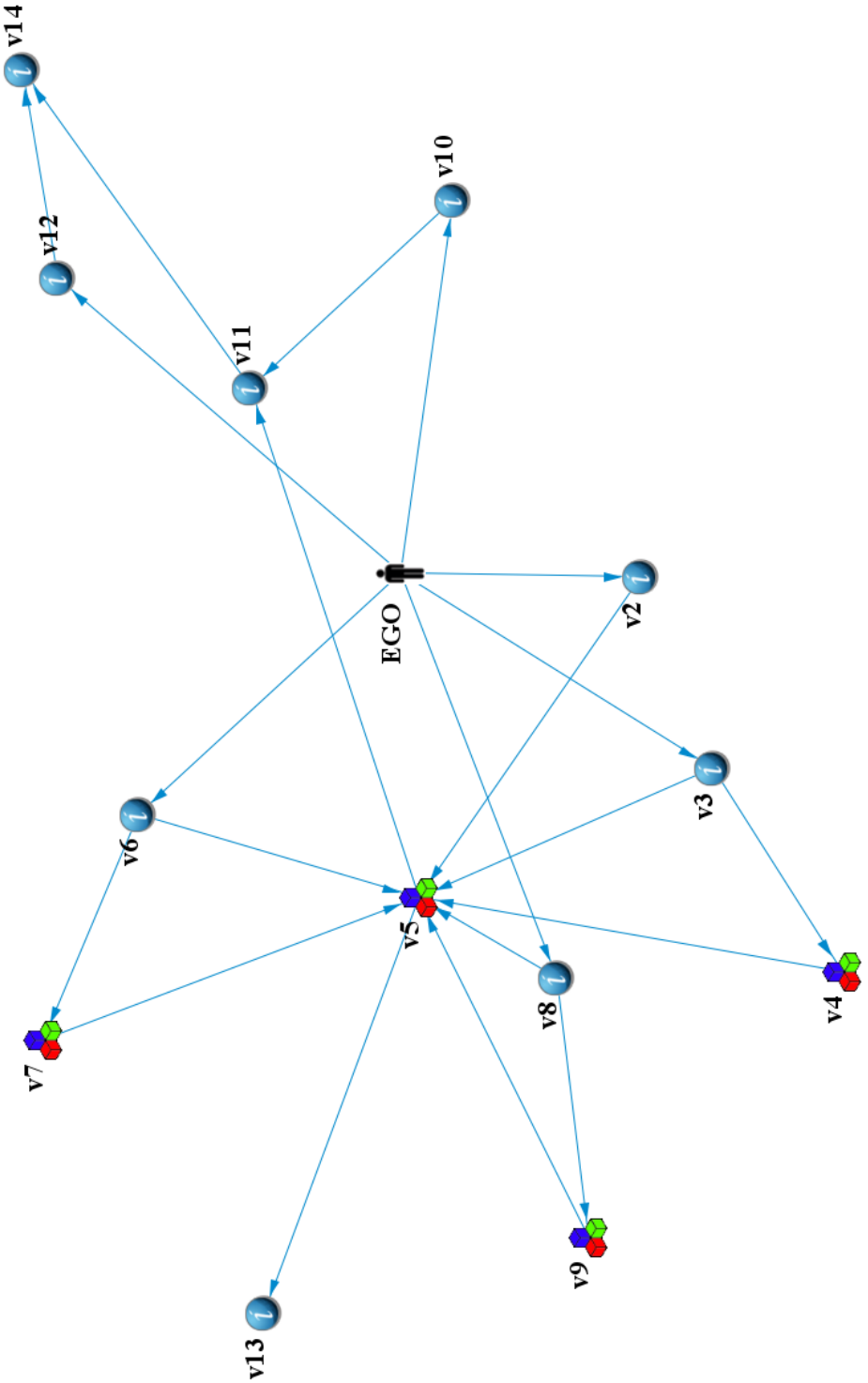


Visualisation 24.2: Harrison 1987, Model Two - vertext count=23, link count=130, density=0.257

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19	v20	v21	v22	v23
EGO	0	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0
v2	1	0	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0
v3	1	1	0	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0
v4	1	1	1	0	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0
v5	1	1	1	1	0	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0
v6	1	1	1	1	1	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0
v7	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
v9	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 24.2: Harrison 1987, Model Two - binary matrix

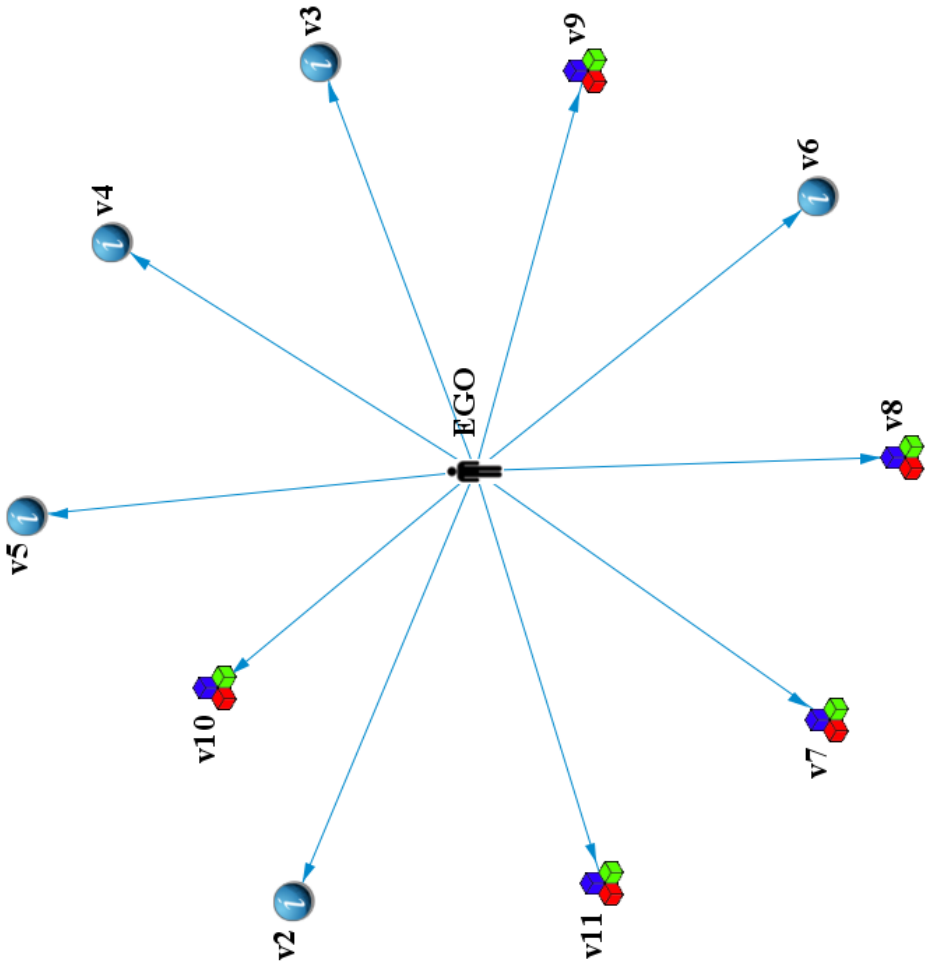
25. Hodge 1979



Visualisation 25.1: Hodge 1979, Model One - vertex count=14, link count=21, density=0.115

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14
EGO	0	1	1	0	0	1	0	1	0	1	0	1	0	0
v2	0	0	0	0	1	0	0	0	0	0	0	0	0	0
v3	0	0	0	1	1	0	0	0	0	0	0	0	0	0
v4	0	0	0	0	1	0	0	0	0	0	0	0	0	0
v5	0	0	0	0	0	0	0	0	0	0	1	0	2	0
v6	0	0	0	0	1	0	1	0	0	0	0	0	0	0
v7	0	0	0	0	1	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	1	0	0	0	1	0	0	0	0	0
v9	0	0	0	0	1	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 25.1: Hodge 1979, Model One - weighted matrix

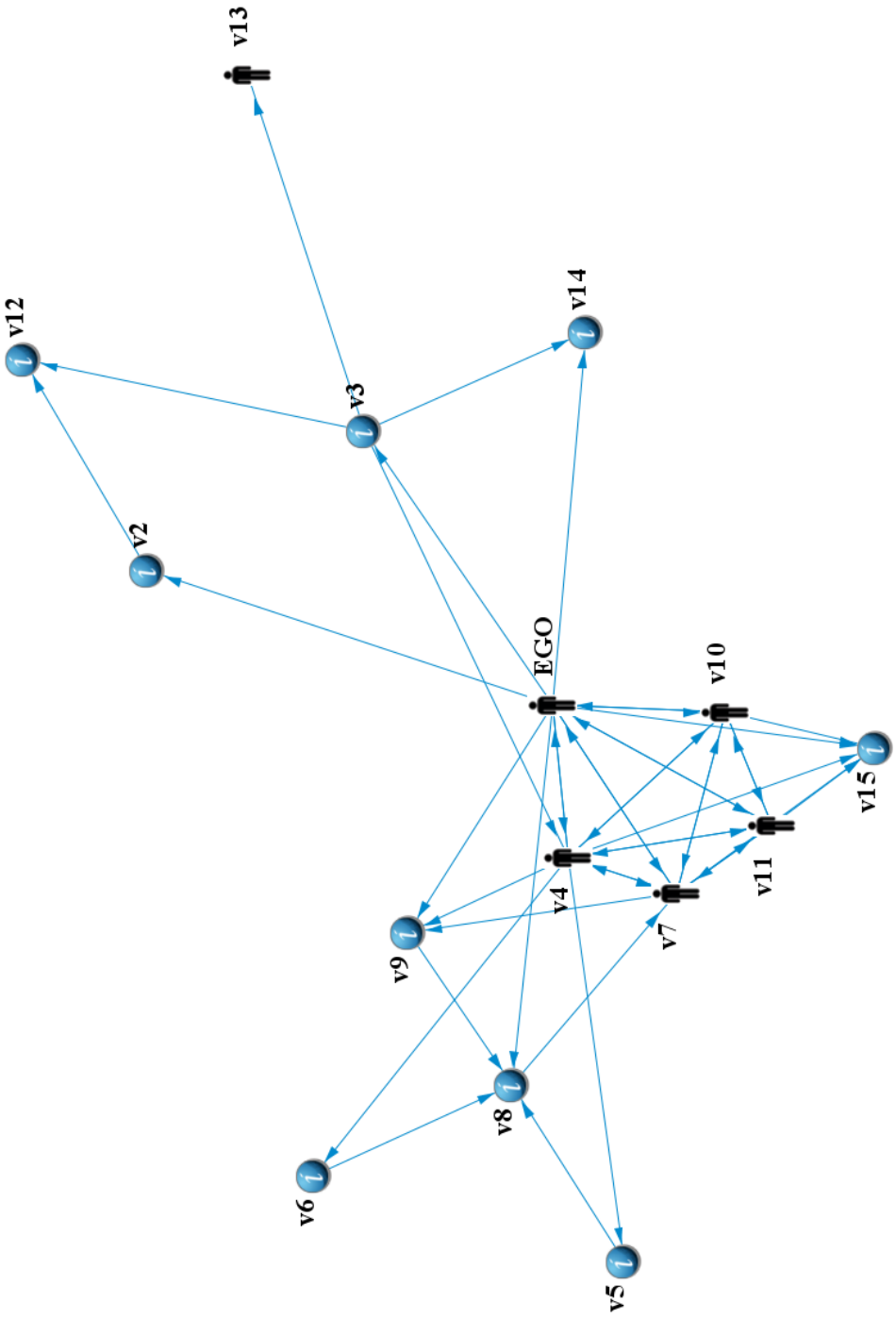


Visualisation 25.2: Hodge 1979, Model Two - vertext count=11, link count=10, density=0.09

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11
EGO	0	1	1	1	1	1	1	1	1	1	1
v2	0	0	0	0	0	0	0	0	0	0	0
v3	0	0	0	0	0	0	0	0	0	0	0
v4	0	0	0	0	0	0	0	0	0	0	0
v5	0	0	0	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0

Matrix 25.2: Hodge 1979, Model Two - binary matrix

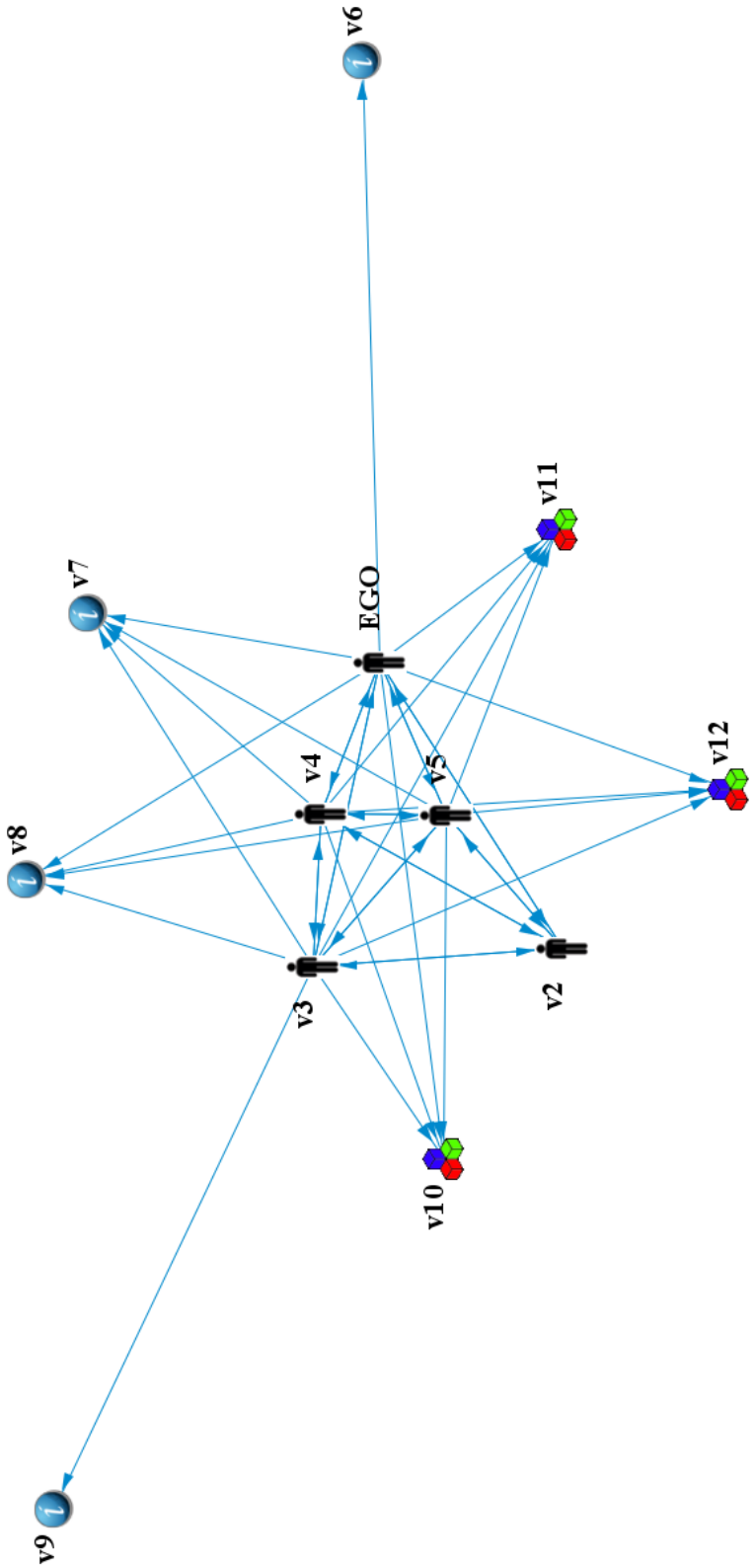
26. Hudson and Pope 1988



Visualisation 26.1: Hudson and Pope 1988, Model One - vertex count=15, link count=43, density=0.205

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15
EGO	0	1	1	3	0	0	3	1	1	1	1	0	0	1	1
v2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v3	0	0	0	1	0	0	0	0	0	0	0	1	1	1	0
v4	3	0	0	0	2	2	2	0	1	1	1	0	0	0	1
v5	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
v7	3	0	0	2	0	0	0	0	1	1	1	0	0	0	1
v8	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
v10	1	0	0	1	0	0	1	0	0	0	1	0	0	0	1
v11	1	0	0	1	0	0	1	0	0	1	0	0	0	0	1
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 26.1: Hudson and Pope 1981, Model One - weighted matrix

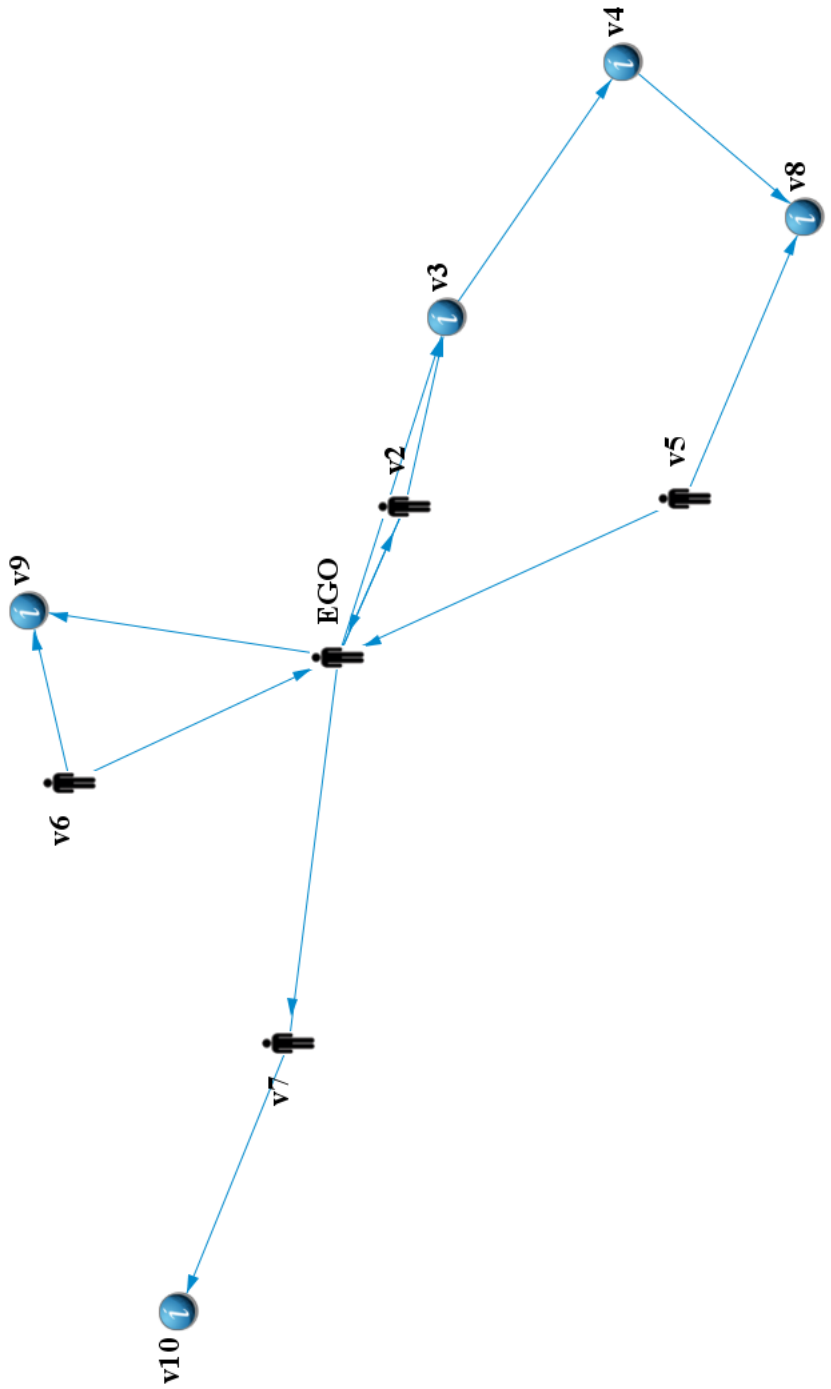


Visualisation 26.2: Hudson and Pope 1981, Model Two - vertext count=12, link count=42, density=0.318

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12
EGO	0	1	1	1	1	1	1	1	0	1	1	1
v2	1	0	1	1	1	0	0	0	0	0	0	0
v3	1	1	0	1	1	0	1	1	1	1	1	1
v4	1	1	1	0	1	0	1	1	0	1	1	1
v5	1	1	1	1	0	0	1	1	0	1	1	1
v6	0	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 26.2: Hudson and Pope 1981, Model Two - binary matrix

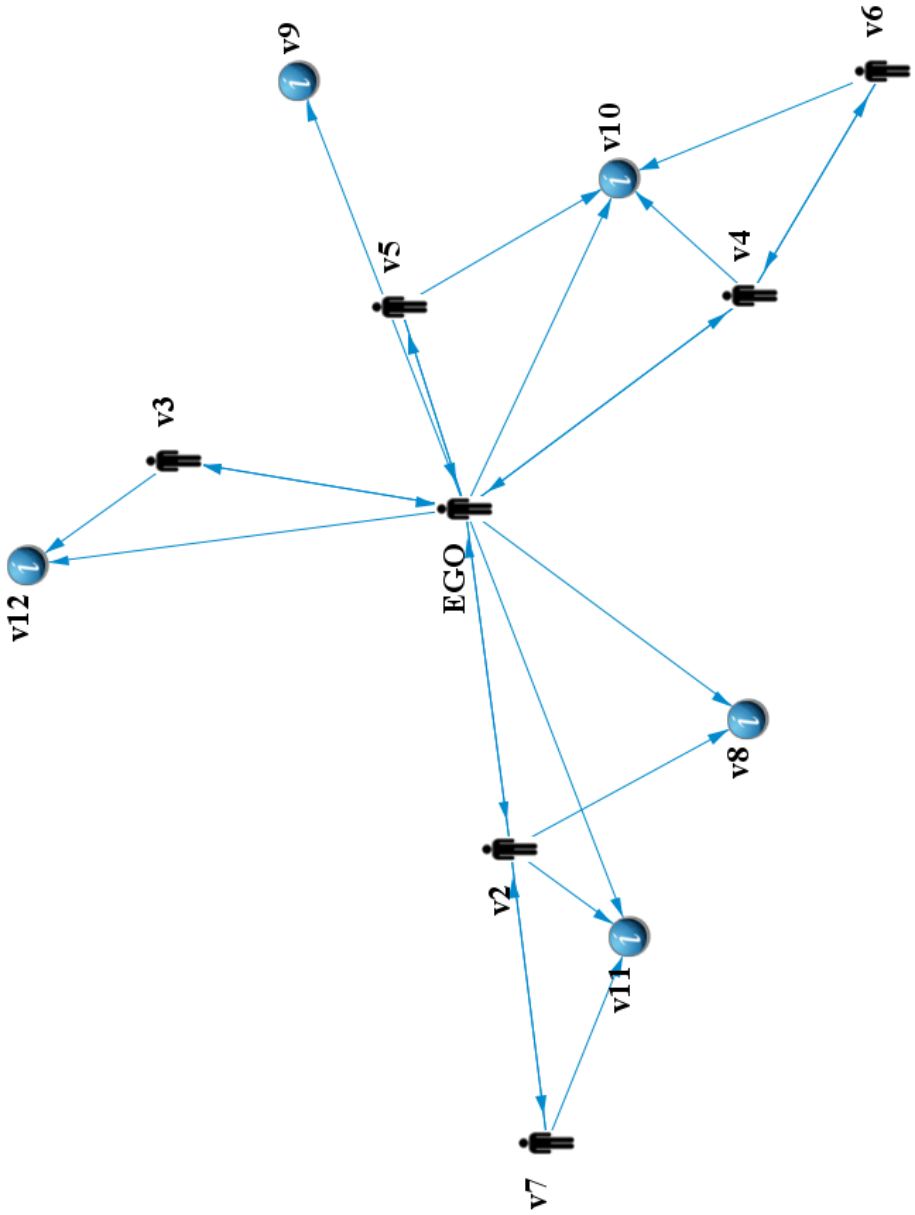
27. Kanner 1979



Visualisation 27.1: Kanner 1979, Model One - vertex count=10, link count=13, density=0.14

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10
EGO	0	1	1	0	0	0	1	0	1	0
v2	1	0	1	0	0	0	0	0	0	0
v3	0	0	0	1	0	0	0	0	0	0
v4	0	0	0	0	0	0	0	1	0	0
v5	1	0	0	0	0	0	0	1	0	0
v6	1	0	0	0	0	0	0	0	1	0
v7	0	0	0	0	0	0	0	0	0	1
v8	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0

Matrix 27.1: Kanner 1979, Model One - weighted matrix

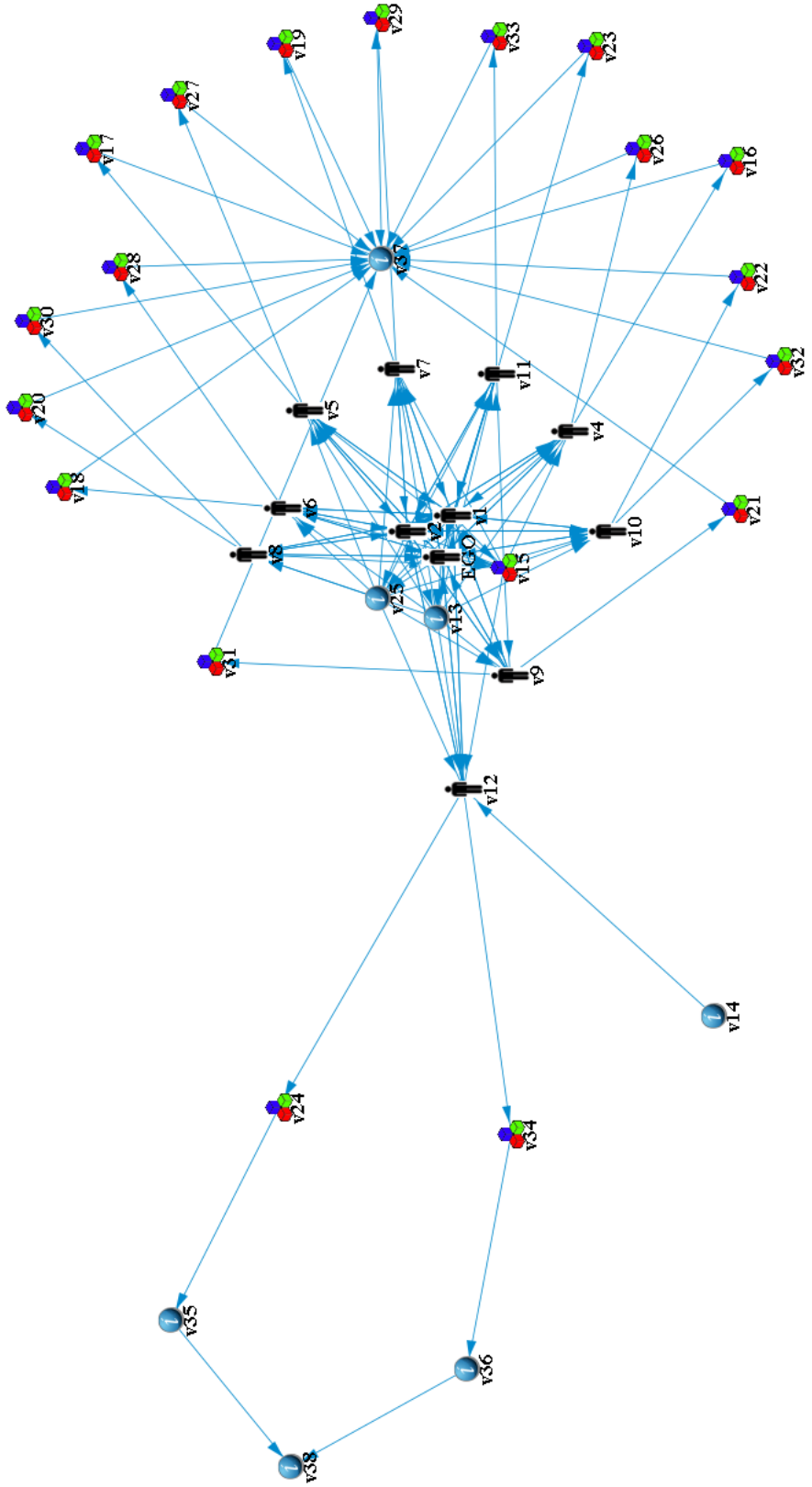


Visualisation 27.2: Kanner 1979, Model Two - vertext count=12, link count=24, density=0.182

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12
EGO	0	1	1	1	1	0	0	1	1	1	1	1
v2	1	0	0	0	0	0	1	1	0	0	1	0
v3	1	0	0	0	0	0	0	0	0	0	0	1
v4	1	0	0	0	0	1	0	0	0	1	0	0
v5	1	0	0	0	0	0	0	0	0	1	0	0
v6	0	0	0	1	0	0	0	0	0	1	0	0
v7	0	1	0	0	0	0	0	0	0	0	1	0
v8	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 27.2: Kanner 1979, Model Two - binary matrix

28. Kappas 1987



Visualisation 28.1: Kappas 1987, Model One - vertex count=38, link count=129, density=0.09$_2$

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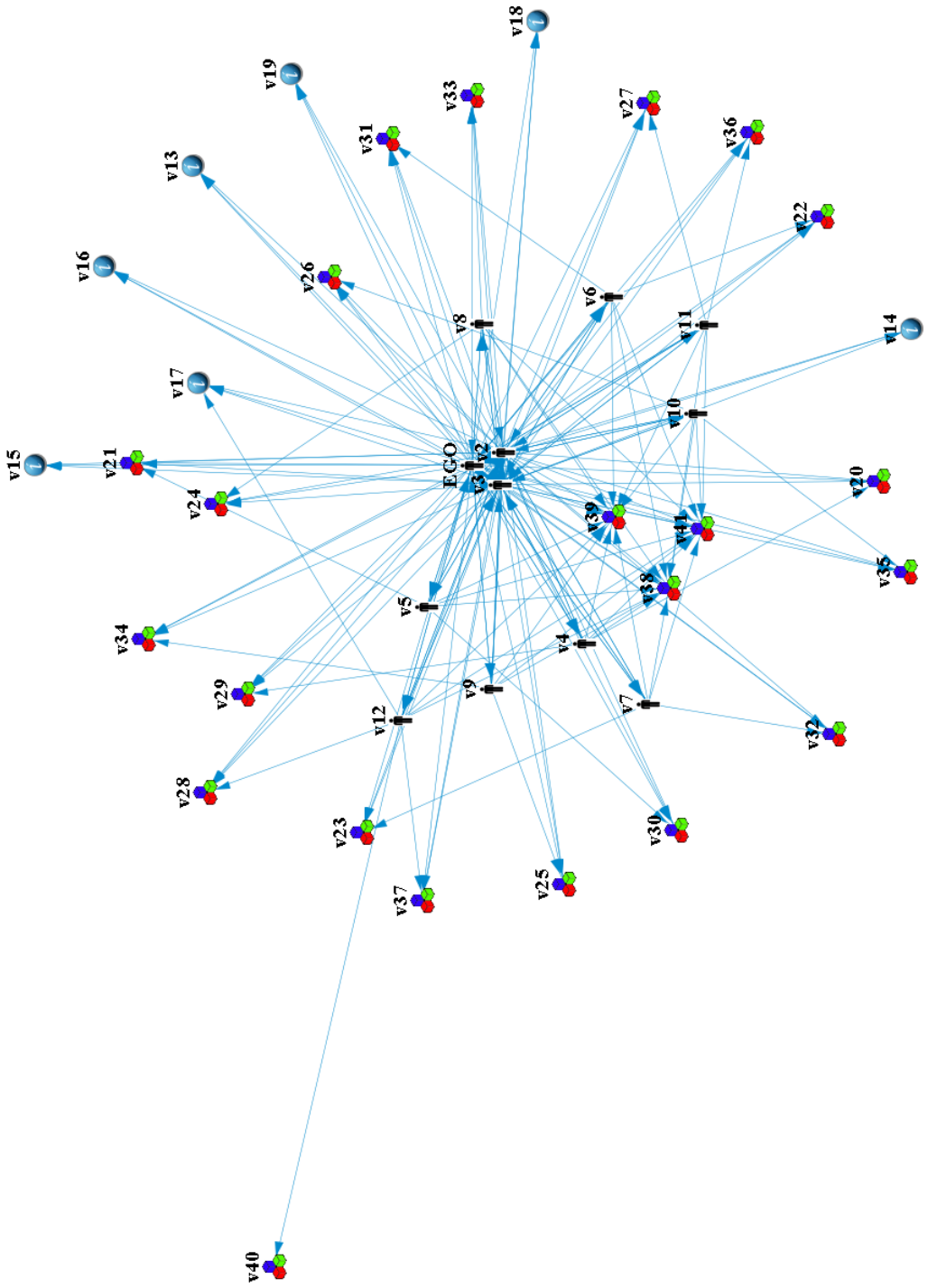
	v1	EGO	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19	v20
v1	0	0	0	3	3	3	3	3	3	3	3	3	1	0	1	0	0	0	0	0
v2	0	0	0	3	3	3	3	3	3	3	3	3	1	0	1	0	0	0	0	0
EGO	0	0	0	3	3	3	3	3	3	3	3	3	1	0	1	0	0	0	0	0
v4	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
v5	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v6	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v7	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v8	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v9	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
v15	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v25	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
v26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 28.1: Kappas 1987, Model One - weighted matrix (Cont. next page)

⟹	v21	v22	v23	v24	v25	v26	v27	v28	v29	v30	v31	v32	v33	v34	v35	v36	v37	v38
v1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
v2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
EGO	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
v4	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
v5	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
v9	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
v10	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
v11	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v12	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Visualisation 28.2: Kappas 1987, Model Two - vertext count=41, link count=191, density=0.117

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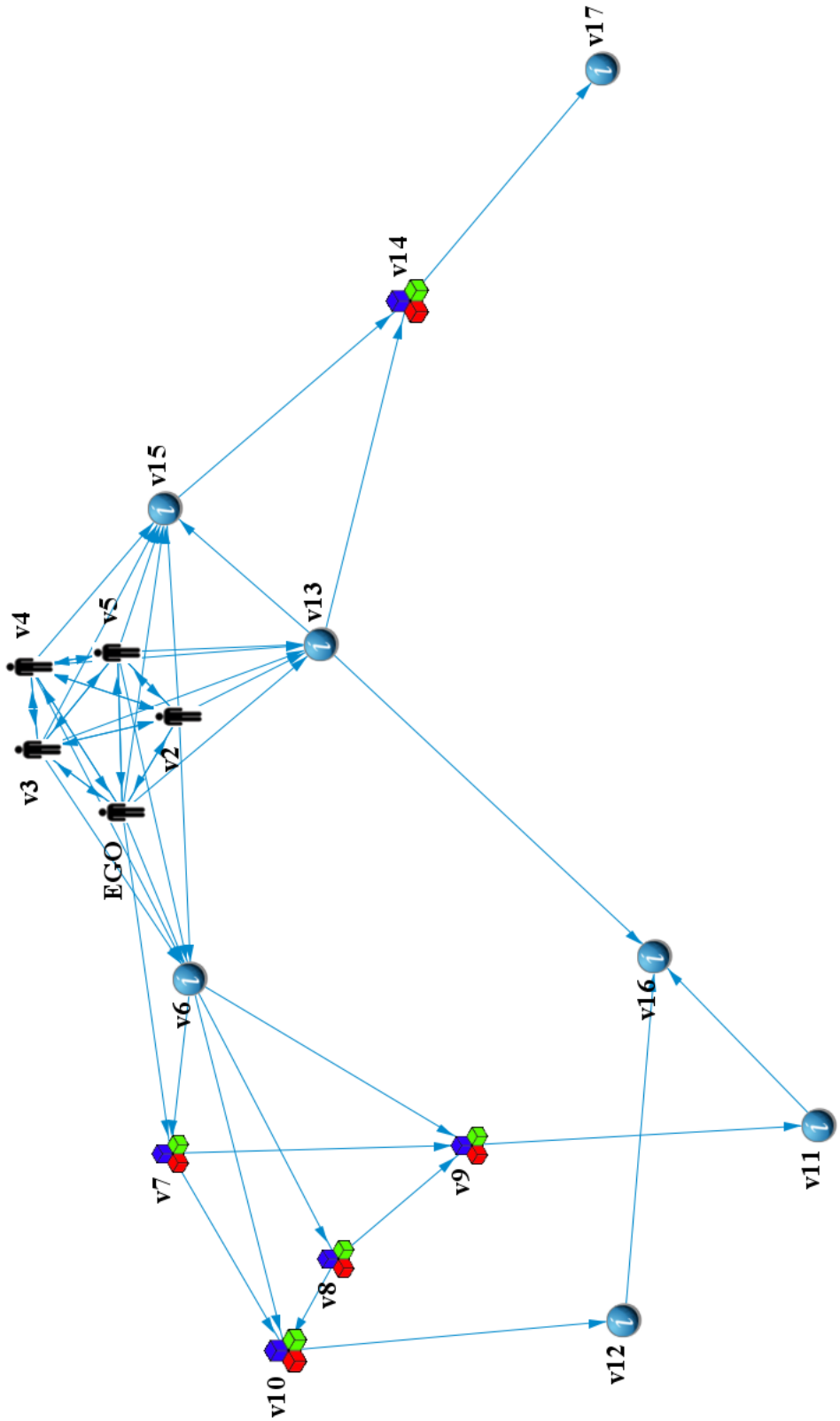
	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19	v20	v21
EGO	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
v2	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
v3	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
v4	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v5	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v6	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v7	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 28.2: Kappas 1987, Model Two - binary matrix (Cont. next page)

$\Longrightarrow$	v22	v23	v24	v25	v26	v27	v28	v29	v30	v31	v32	v33	v34	v35	v36	v37	v38	v39	v40	v41
EGO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
v2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
v3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
v4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	1
v5	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	1
v6	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	1
v7	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	1
v8	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	1
v9	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	1
v10	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	1	0	1
v11	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	1	0	1
v12	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	1	1	1
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

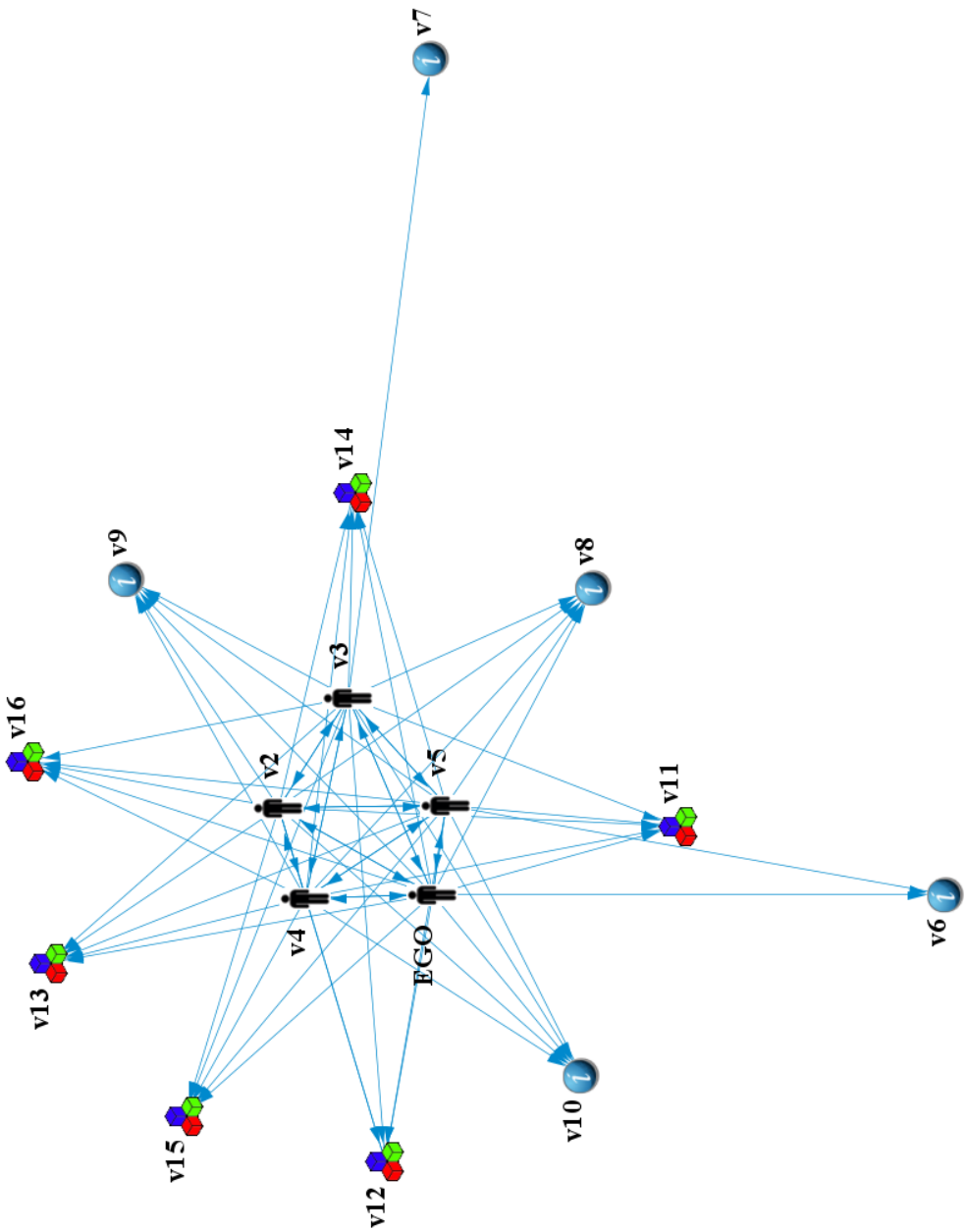
29. Kirk 1989



Visualisation 29.1: Kirk 1989, Model One - vertex count=17, link count=53, density=0.195

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17
EGO	0	3	3	3	3	1	1	0	0	0	0	0	1	0	1	0	0
v2	3	0	3	3	3	1	0	0	0	0	0	0	1	0	1	0	0
v3	3	3	0	3	3	1	0	0	0	0	0	0	1	0	1	0	0
v4	3	3	3	0	3	1	0	0	0	0	0	0	1	0	1	0	0
v5	3	3	3	3	0	1	0	0	0	0	0	0	1	0	1	0	0
v6	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 29.1: Kirk 1989, Model One - weighted matrix

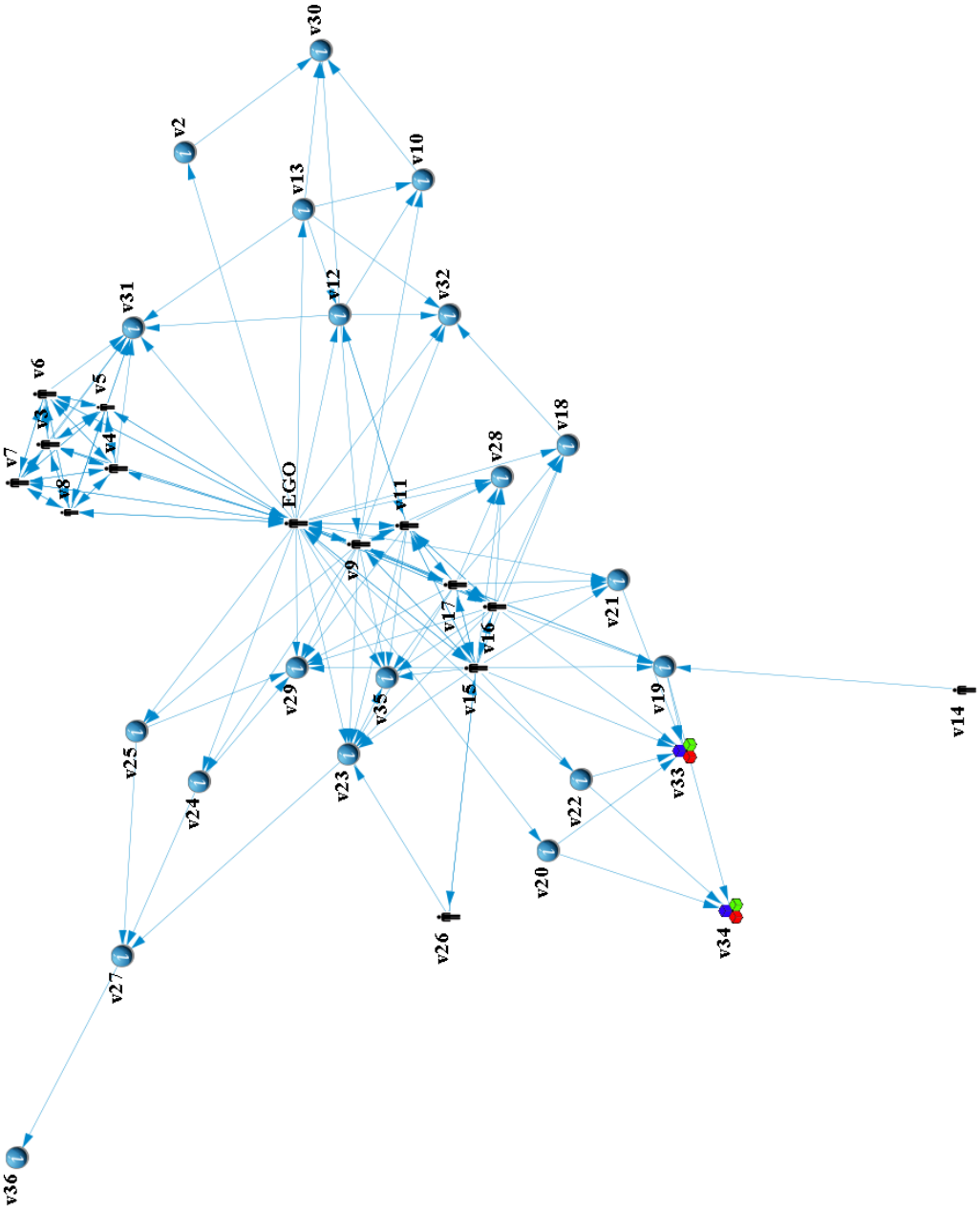


Visualisation 29.2: Kirk 1989, Model Two - vertext count=16, link count=68, density=0.28$3$

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16
EGO	0	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
v2	1	0	1	1	1	0	0	1	1	1	1	1	1	1	1	1
v3	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1
v4	1	1	1	0	1	0	0	1	1	1	1	1	1	1	1	1
v5	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1
v6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 29.2: Kirk 1989, Model Two - binary matrix

30. Kroto 1993



Visualisation 30.1: Kroto 1993, Model One - vertex count=36, link count=163, density=0.129

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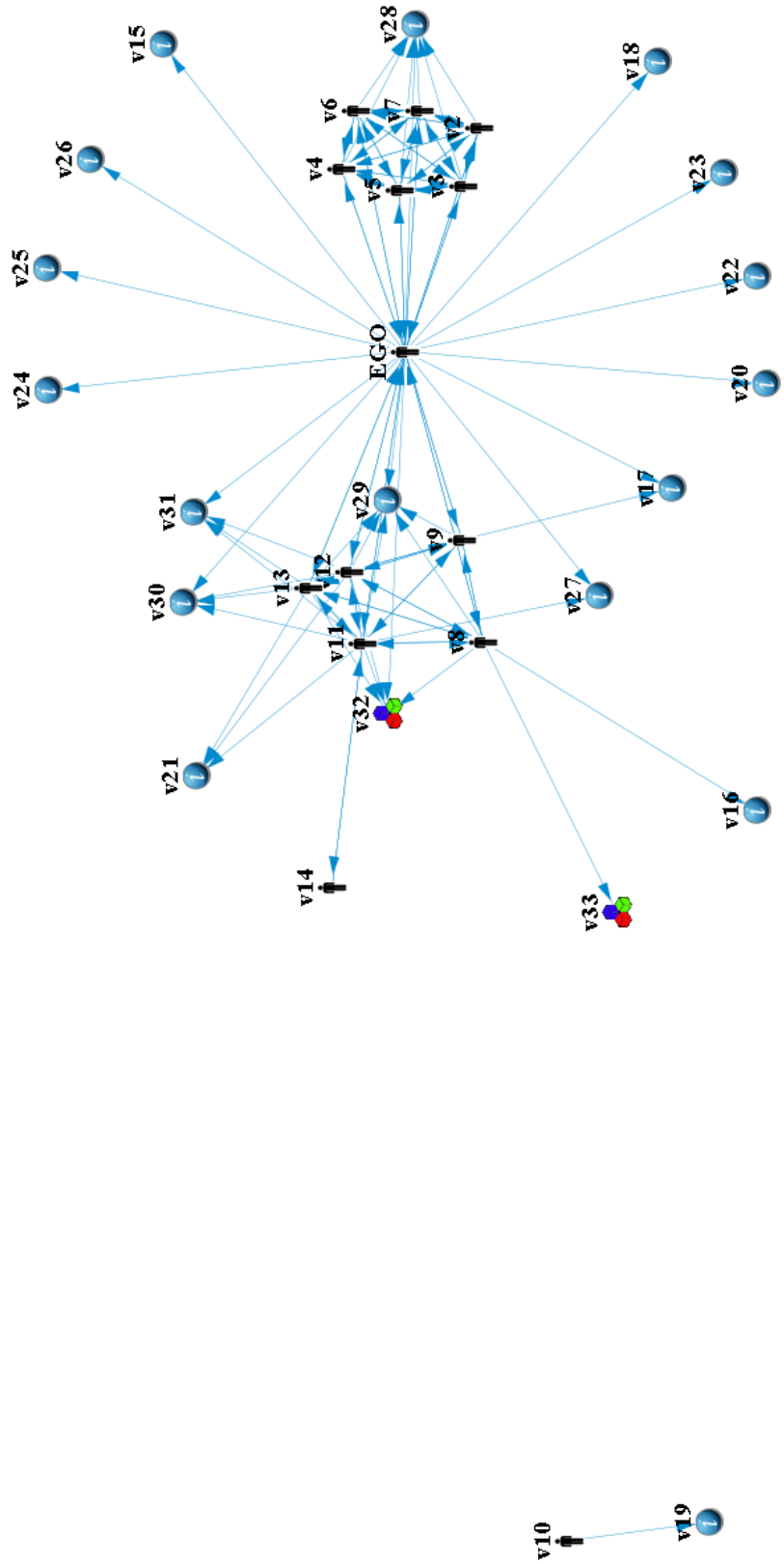
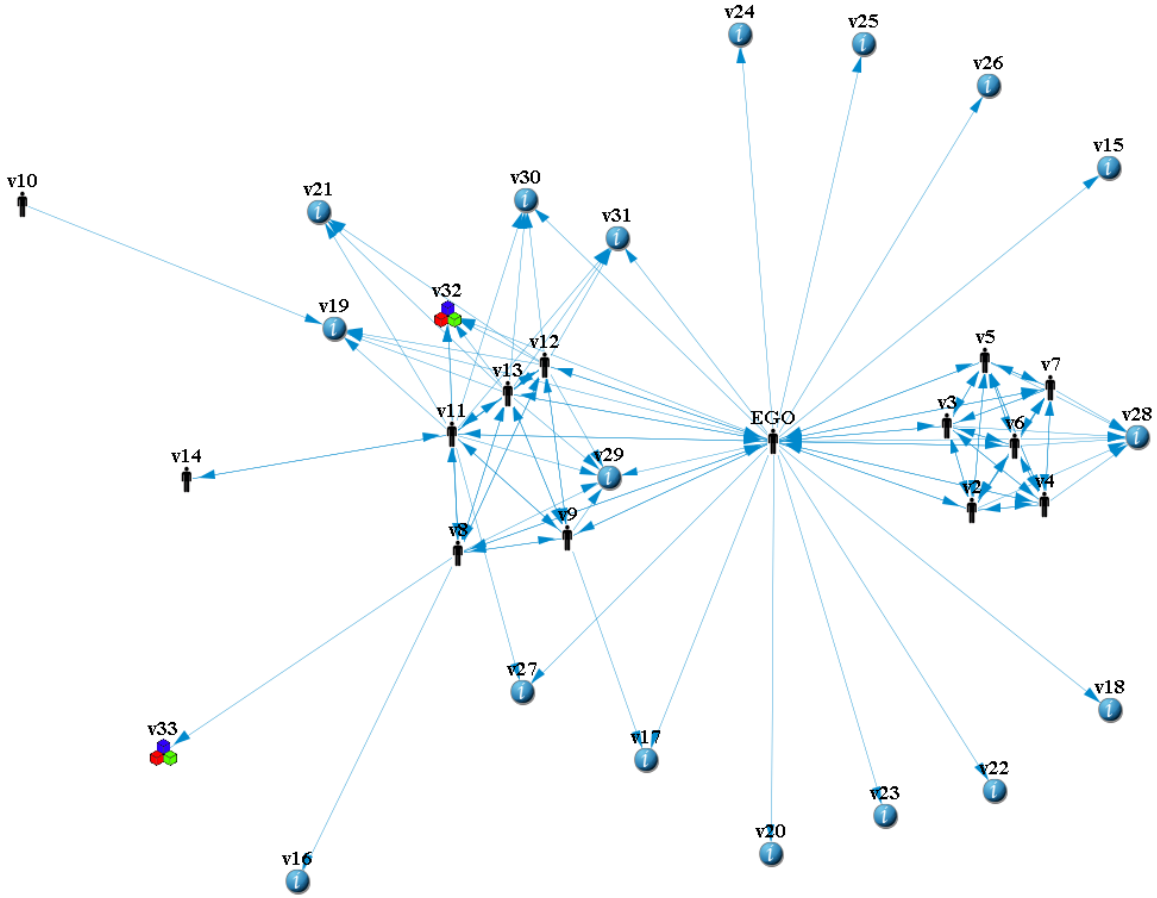
	v1	EGO	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19
EGO	0	1	1	1	1	1	1	1	3	0	3	1	1	0	6	5	5	1	2
v2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v3	1	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
v4	1	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
v5	1	0	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0
v6	1	0	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0
v7	1	0	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0
v8	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
v9	3	0	0	0	0	0	0	0	0	1	3	0	0	0	2	2	2	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	3	0	0	0	0	0	0	0	4	0	0	1	0	0	2	2	2	0	0
v12	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v15	6	0	0	0	0	0	0	0	2	0	2	0	0	0	0	6	6	1	2
v16	5	0	0	0	0	0	0	0	2	0	2	0	0	0	6	0	6	1	2
v17	5	0	0	0	0	0	0	0	2	0	2	0	0	0	6	6	0	1	2
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v22	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
v27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 30.1: Kroto 1993, Model One - weighted matrix (Cont. next page)

⟹	v20	v21	v22	v23	v24	v25	v26	v27	v28	v29	v30	v31	v32	v33	v34	v35	v36
EGO	1	1	0	1	1	1	0	0	3	3	0	1	1	0	0	1	0
v2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
v3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v5	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v6	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v9	0	0	0	1	1	1	0	0	1	1	0	0	1	0	0	1	0
v10	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
v11	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	1	0
v12	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	1	1	2	0	0	1	0	1	1	0	0	0	1	0	1	0
v16	0	1	0	1	0	0	0	0	1	1	0	0	0	1	0	1	0
v17	0	1	0	1	0	0	0	0	1	1	0	0	0	0	0	1	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
v21	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v22	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
v23	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
v24	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0
v25	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0
v26	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
v27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Visualisation 30.2: Kroto 1993, Model Two (with errors) - vertext count=33, link count=118, density=0.11^2



Visualisation 30.3: Kroto 1993, Model Two (corrected) - vertext count=33, link count=122, density=0.116

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17
EGO	0	1	1	1	1	1	1	1	1	0	1	1	1	0	1	0	1
v2	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
v3	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0
v4	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0
v5	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0
v6	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0
v7	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
v8	1	0	0	0	0	0	0	0	1	0	1	1	1	0	0	1	0
v9	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0	0	1
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	1	0	0	0	0	0	0	1	1	0	0	1	1	1	0	0	0
v12	1	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0
v13	1	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

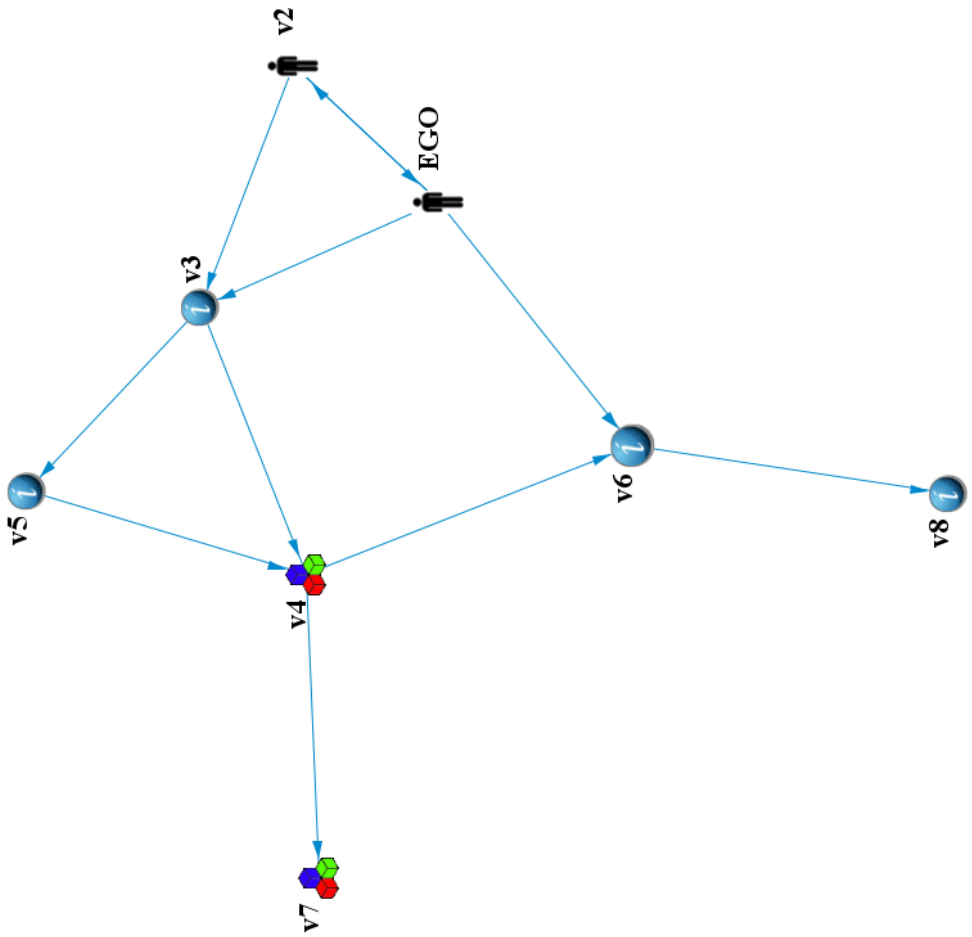
Matrix 30.2: Kroto 1993, Model Two (with errors) - binary matrix (Cont. next page)

$\Longrightarrow$	v18	v19	v20	v21	v22	v23	v24	v25	v26	v27	v28	v29	v30	v31	v32	v33
EGO	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0
v2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v5	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v6	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
v9	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
v10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	1	0	0	0	0	0	1	0	1	1	1	1	0
v12	0	0	0	1	0	0	0	0	0	0	0	1	1	1	1	0
v13	0	0	0	1	0	0	0	0	0	0	0	1	1	1	1	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	...	v19	...
EGO	...	**1**	...
v2	...	0	...
v3	...	0	...
v4	...	0	...
v5	...	0	...
v6	...	0	...
v7	...	0	...
v8	...	0	...
v9	...	0	...
v10	...	1	...
v11	...	**1**	...
v12	...	**1**	...
v13	...	**1**	...
...	...	...	...

Matrix 30.3: Kroto 1993, Model Two (corrected) - excerpt from corrected binary matrix (changes in red)

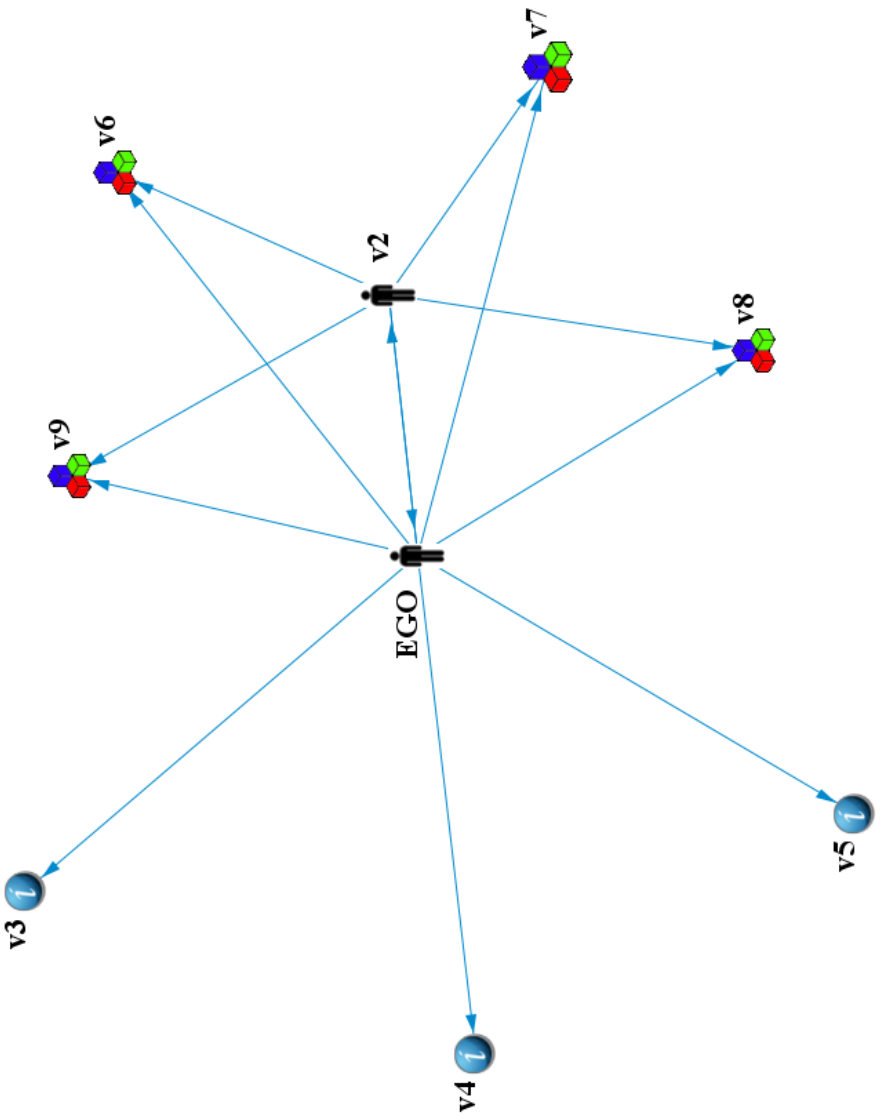
31. Kuwabara 1993



Visualisation 31.1: Kuwabara 1993, Model One - vertex count=8, link count=11, density=0.196

	EGO	v2	v3	v4	v5	v6	v7	v8
EGO	0	2	1	0	0	1	0	0
v2	2	0	1	0	0	0	0	0
v3	0	0	0	1	1	0	0	0
v4	0	0	0	0	0	1	1	0
v5	0	0	0	1	0	0	0	0
v6	0	0	0	0	0	0	0	1
v7	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0

Matrix 31.1: Kuwabara 1993, Model One - weighted matrix

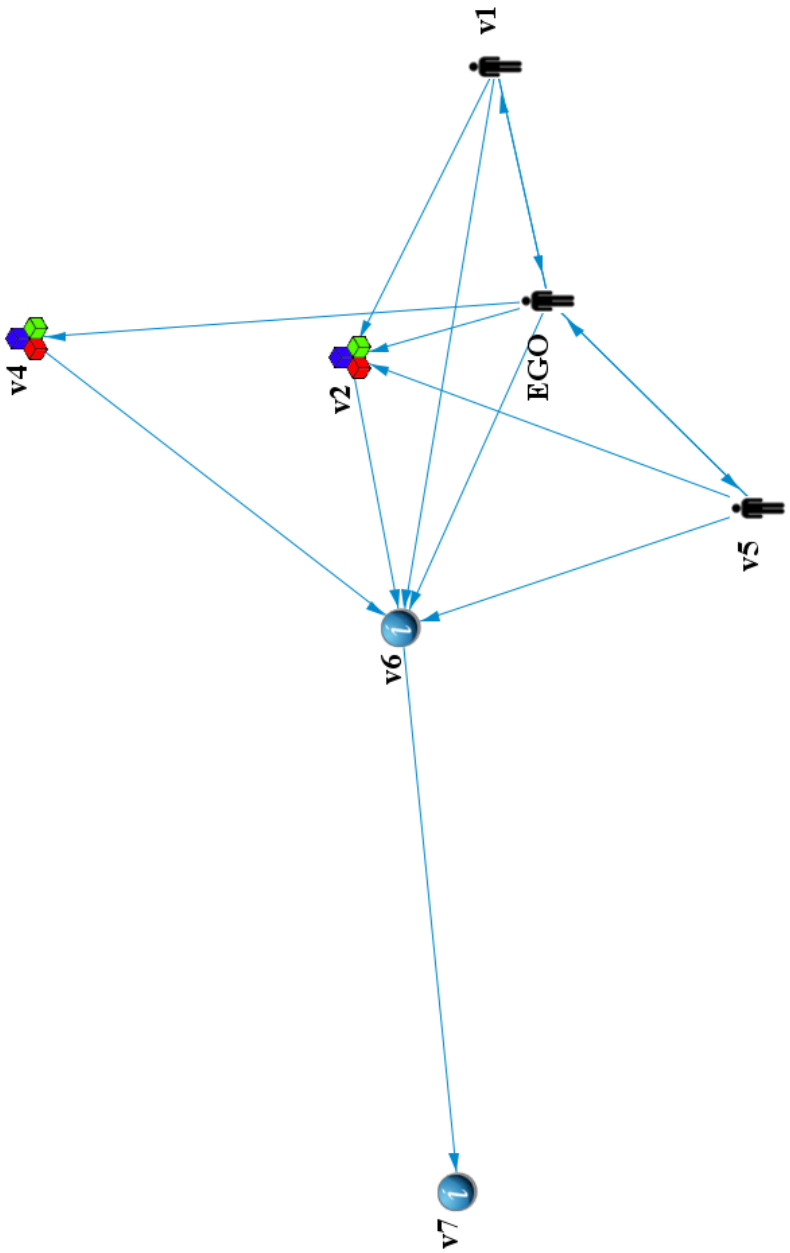


Visualisation 31.2: Kuwabara 1993, Model Two - vertext count=9, link count=13, density=0.181

	EGO	v2	v3	v4	v5	v6	v7	v8	v9
EGO	0	1	1	1	1	1	1	1	1
v2	1	0	0	0	0	1	1	1	1
v3	0	0	0	0	0	0	0	0	0
v4	0	0	0	0	0	0	0	0	0
v5	0	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0

Matrix 31.2: Kuwabara 1993, Model Two - binary matrix

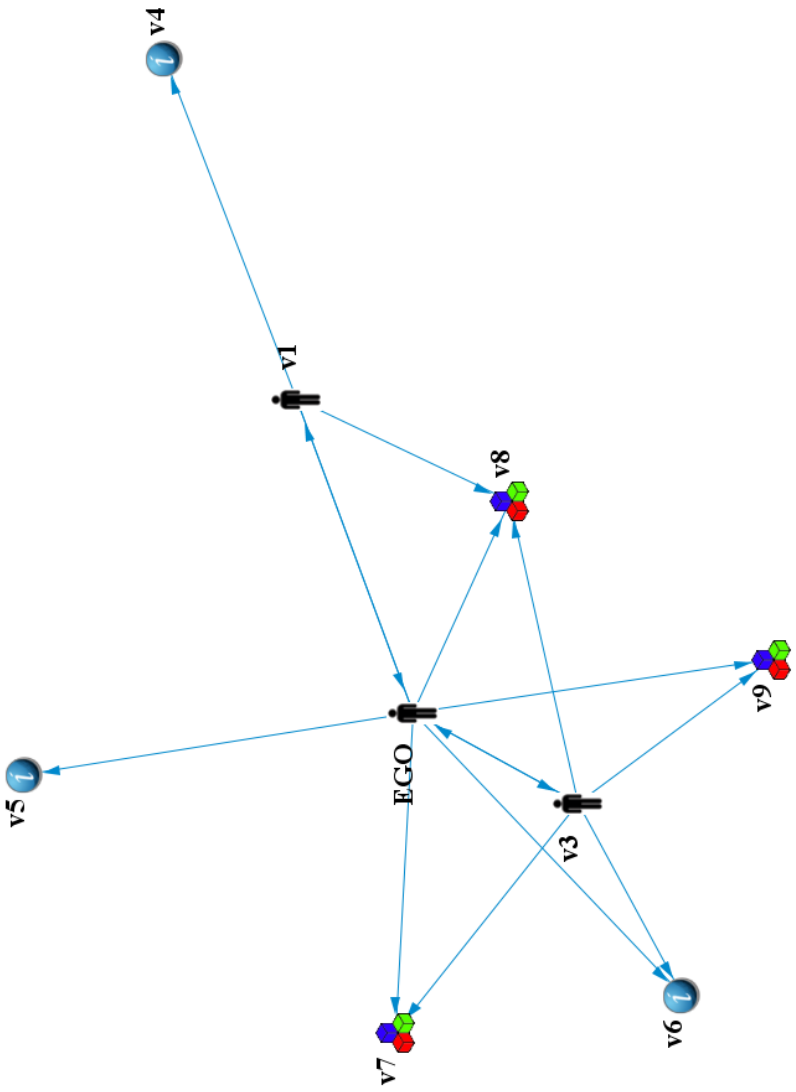
32. Levy 1981



Visualisation 32.1: Levy 1981, Model One - vertex count=7, link count=14, density=0.33β

	v1	v2	EGO	v4	v5	v6	v7
v1	0	1	2	0	0	2	0
v2	0	0	0	0	0	2	0
EGO	1	1	0	1	1	2	0
v4	0	0	0	0	0	1	0
v5	0	1	1	0	0	1	0
v6	0	0	0	0	0	0	1
v7	0	0	0	0	0	0	0

Matrix 32.1: Levy 1981, Model One - weighted matrix

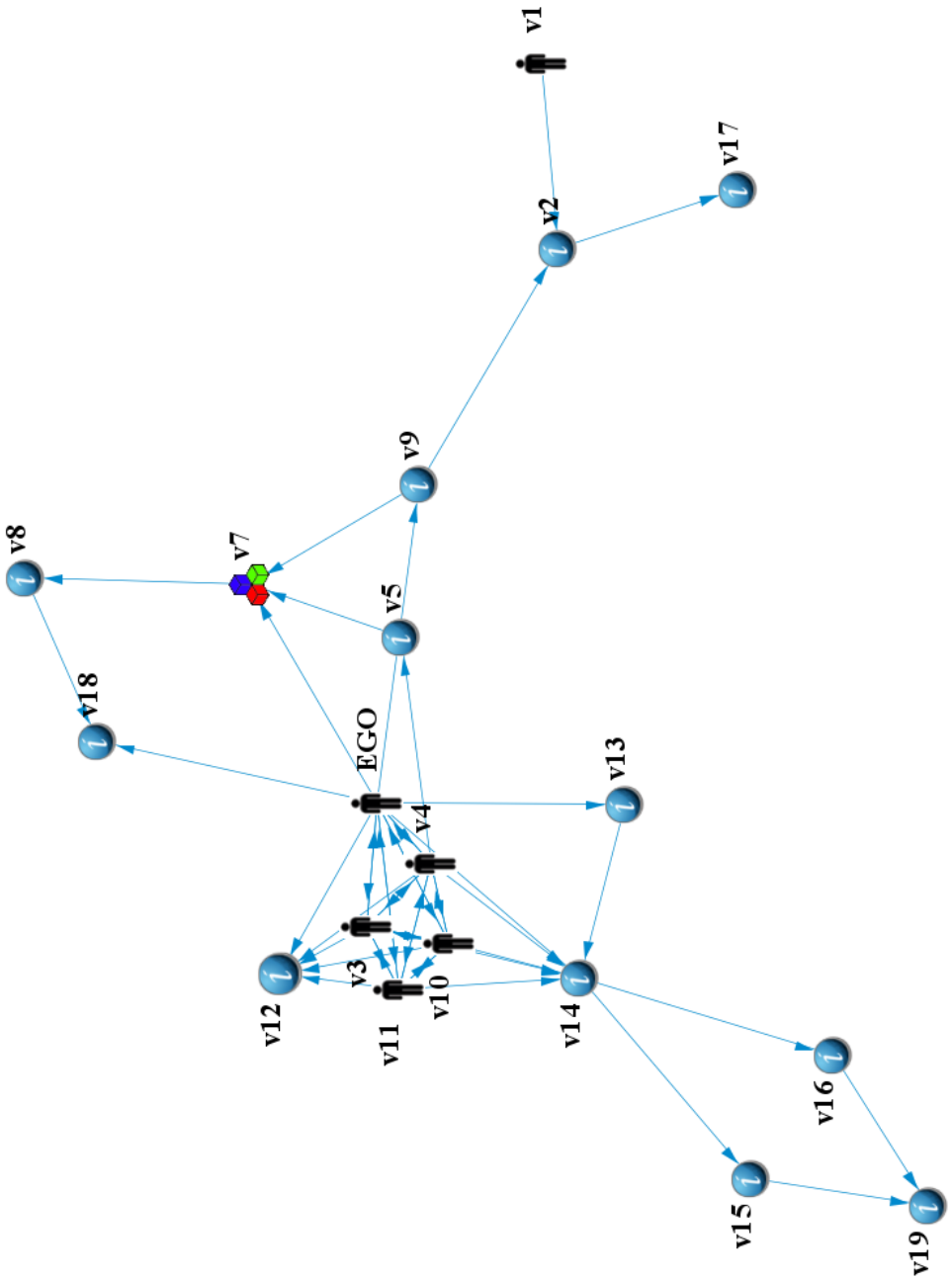


Visualisation 32.2: Levy 1981, Model Two - vertext count=9, link count=15, density=0.208

	v1	EGO	v3	v4	v5	v6	v7	v8	v9
v1	0	1	0	1	0	0	0	1	0
EGO	1	0	1	0	1	1	1	1	1
v3	0	1	0	0	0	1	1	1	1
v4	0	0	0	0	0	0	0	0	0
v5	0	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0

Matrix 32.2: Levy 1981, Model Two - binary matrix

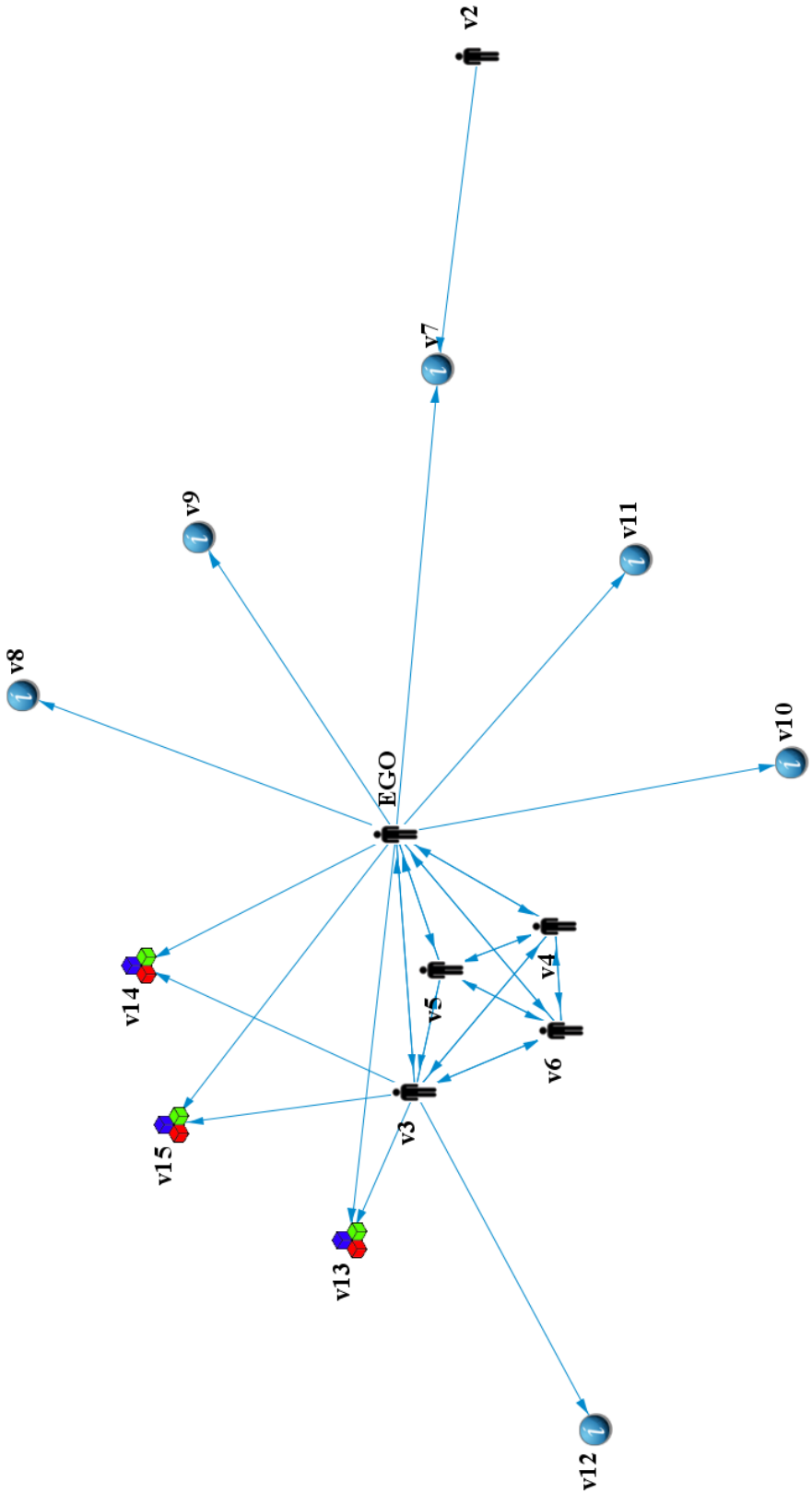
33. Mayer 1992



Visualisation 33.1: Mayer 1992, Model One - vertex count=19, link count=47, density=0.137

	v1	v2	v3	v4	v5	EGO	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19
v1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v3	0	0	0	3	0	2	0	0	0	2	2	1	0	1	0	0	0	0	0
v4	0	0	2	0	1	3	0	0	0	2	2	1	0	1	0	0	0	0	0
v5	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
EGO	0	0	2	3	0	0	1	0	1	2	2	1	1	1	0	0	0	1	0
v7	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v9	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	2	2	0	2	0	0	0	0	2	1	0	1	0	0	0	0	0
v11	0	0	2	2	0	2	0	0	0	2	0	1	0	1	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 33.1: Mayer 1992, Model One - weighted matrix

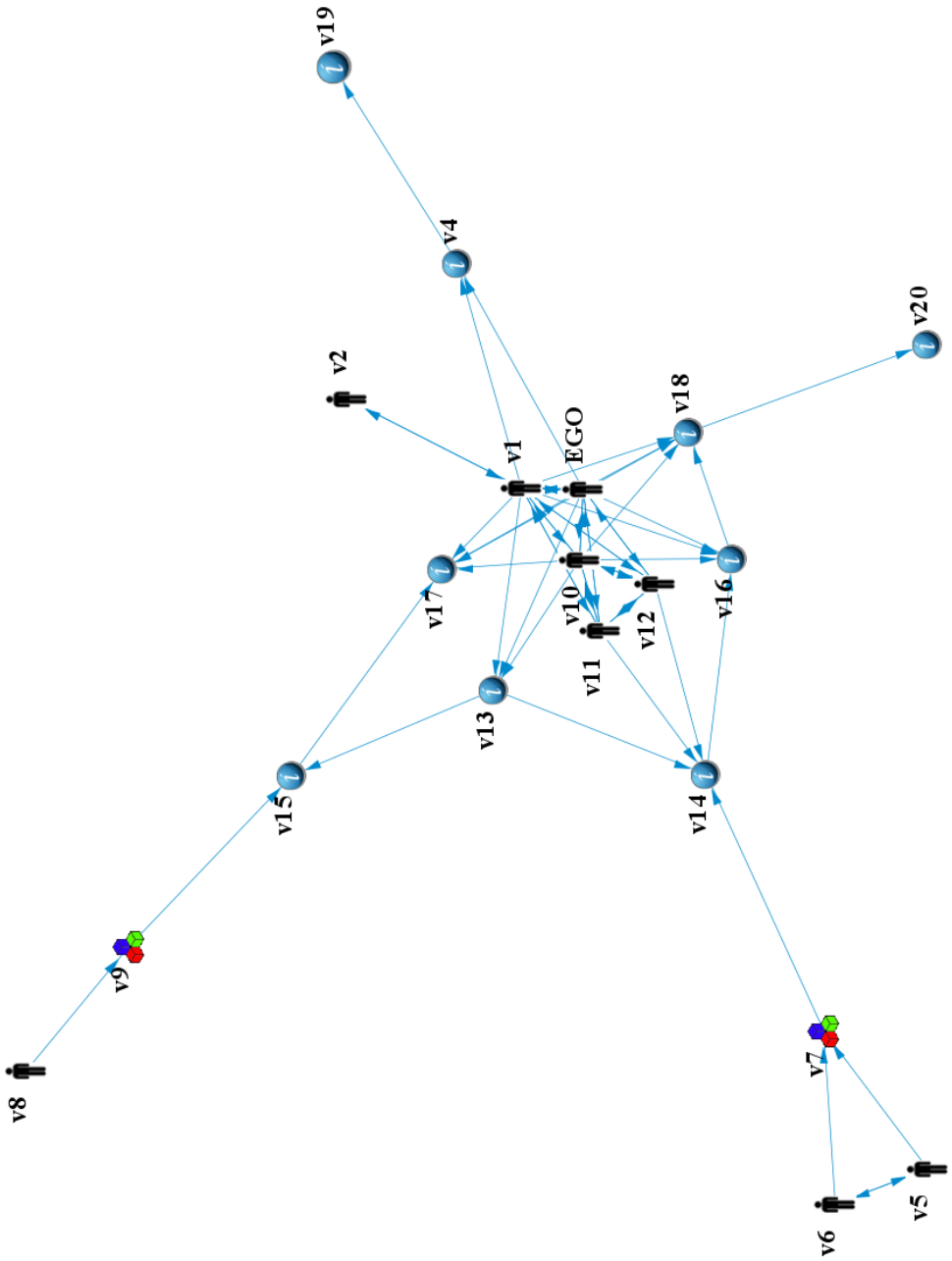


Visualisation 33.2: Mayer 1992, Model Two - vertext count=15, link count=33, density=0.157

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15
EGO	0	0	1	1	1	1	1	1	1	1	1	0	1	1	1
v2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
v3	1	0	0	1	1	1	0	0	0	0	0	1	1	1	1
v4	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0
v5	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0
v6	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 33.2: Mayer 1992, Model Two - binary matrix

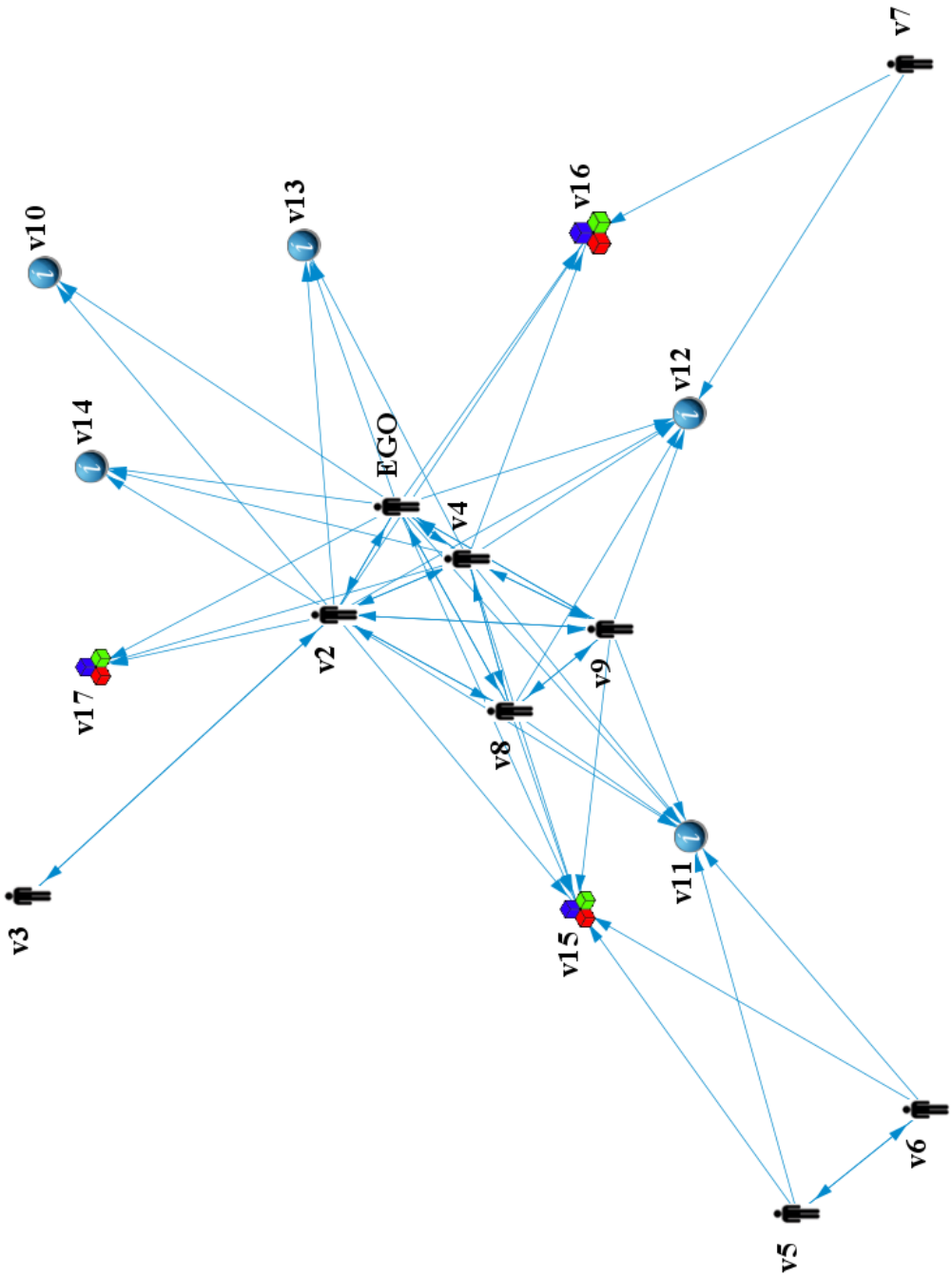
34. Milstein and Brownlee 1992



Visualisation 34.1: Milstein and Brownlee 1992, Model One - vertex count=20, link count=53, density=0.14*0*

	v1	v2	EGO	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19	v20
v1	0	1	4	1	0	0	0	0	0	3	1	1	1	0	0	1	1	1	0	0
v2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EGO	4	0	0	1	0	0	0	0	0	3	1	1	1	0	0	1	1	1	0	0
v4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v5	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
v6	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v10	3	0	3	0	0	0	0	0	0	0	1	1	1	0	0	1	1	1	0	0
v11	1	0	1	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0
v12	1	0	1	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 34.1: Milstein and Brownlee 1992, Model One - weighted matrix

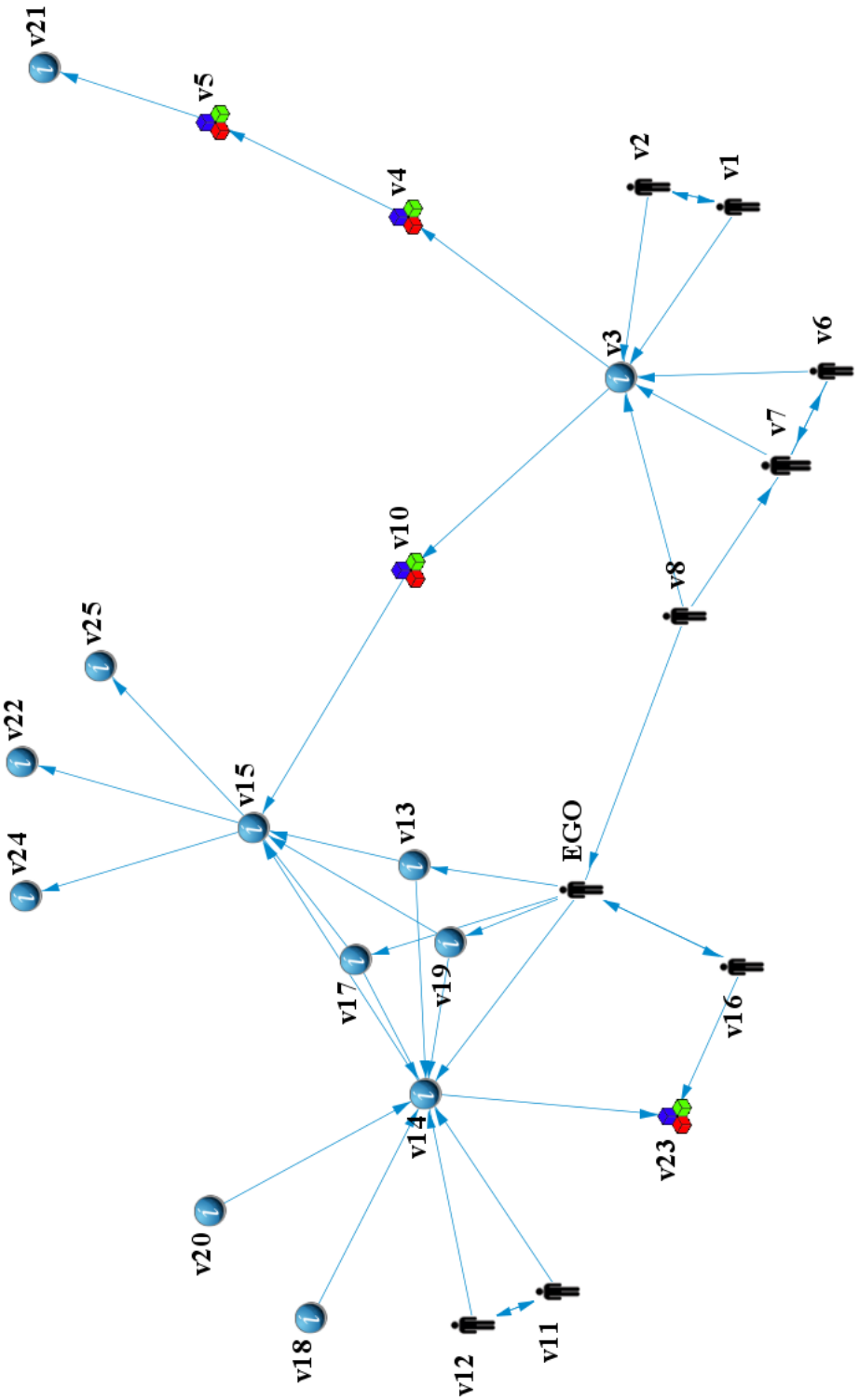


Visualisation 34.2: Milstein and Brownlee 1992, Model Two - vertext count=17, link count=59, density=0.217

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17
EGO	0	1	0	1	0	0	0	1	1	1	1	1	1	1	1	1	1
v2	1	0	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1
v3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v4	1	1	0	0	0	0	0	1	1	0	1	1	1	1	1	1	1
v5	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0
v6	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
v8	1	1	0	1	0	0	0	0	1	0	1	1	0	0	1	0	0
v9	1	1	0	1	0	0	0	1	0	0	1	1	0	0	1	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 34.2: Milstein and Brownlee 1992, Model Two - binary matrix

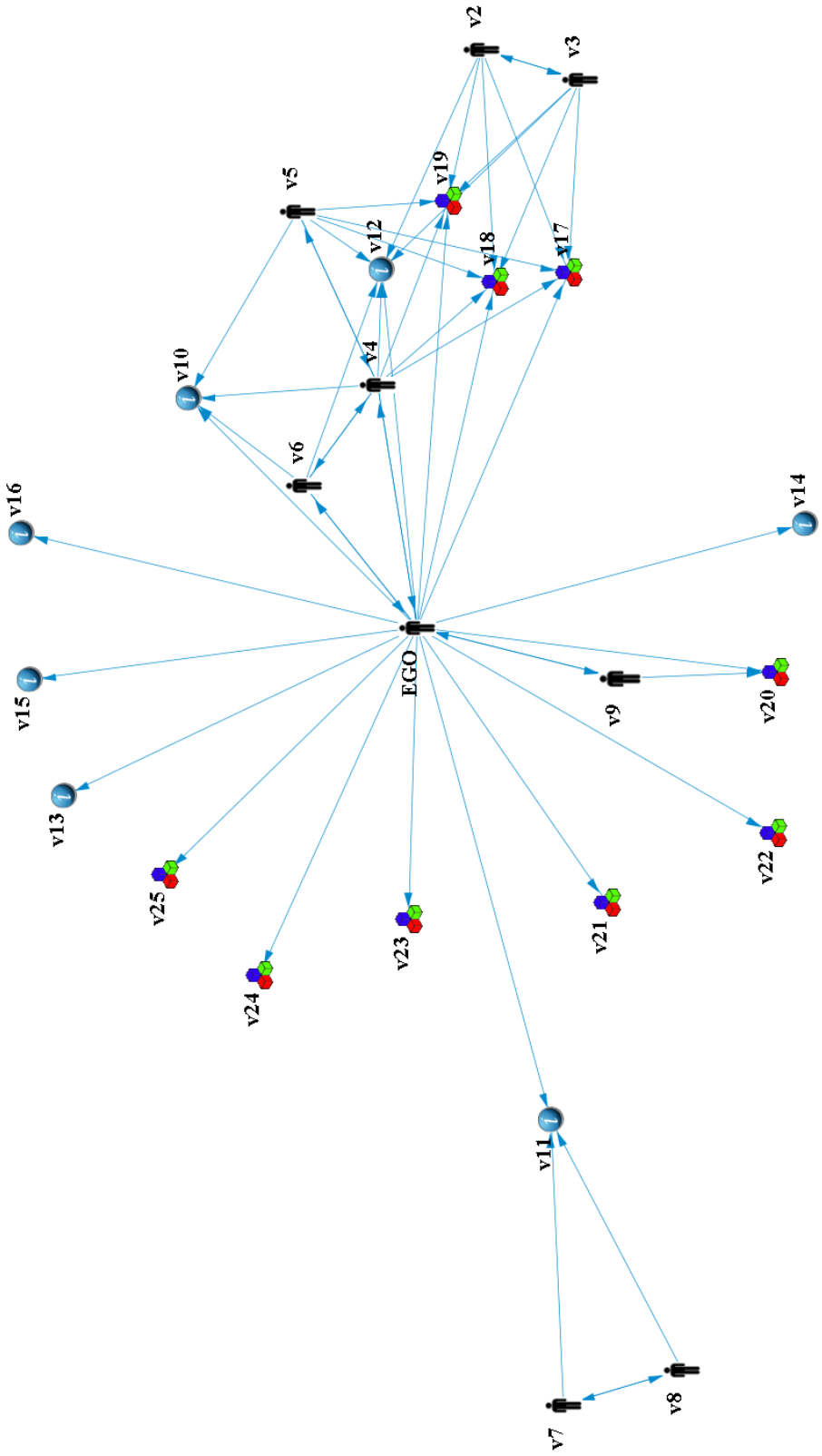
35. Moorhead 1983



Visualisation 35.1: Moorhead 1983, Model One - vertex count=25, link count=40, density=0.067

	v1	v2	v3	v4	v5	v6	v7	v8	EGO	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19	v20	v21	v22	v23	v24	v25
v1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v3	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v4	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
v6	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EGO	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	1	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	2	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
v16	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
v21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 35.1: Moorhead 1983, Model One - weighted matrix

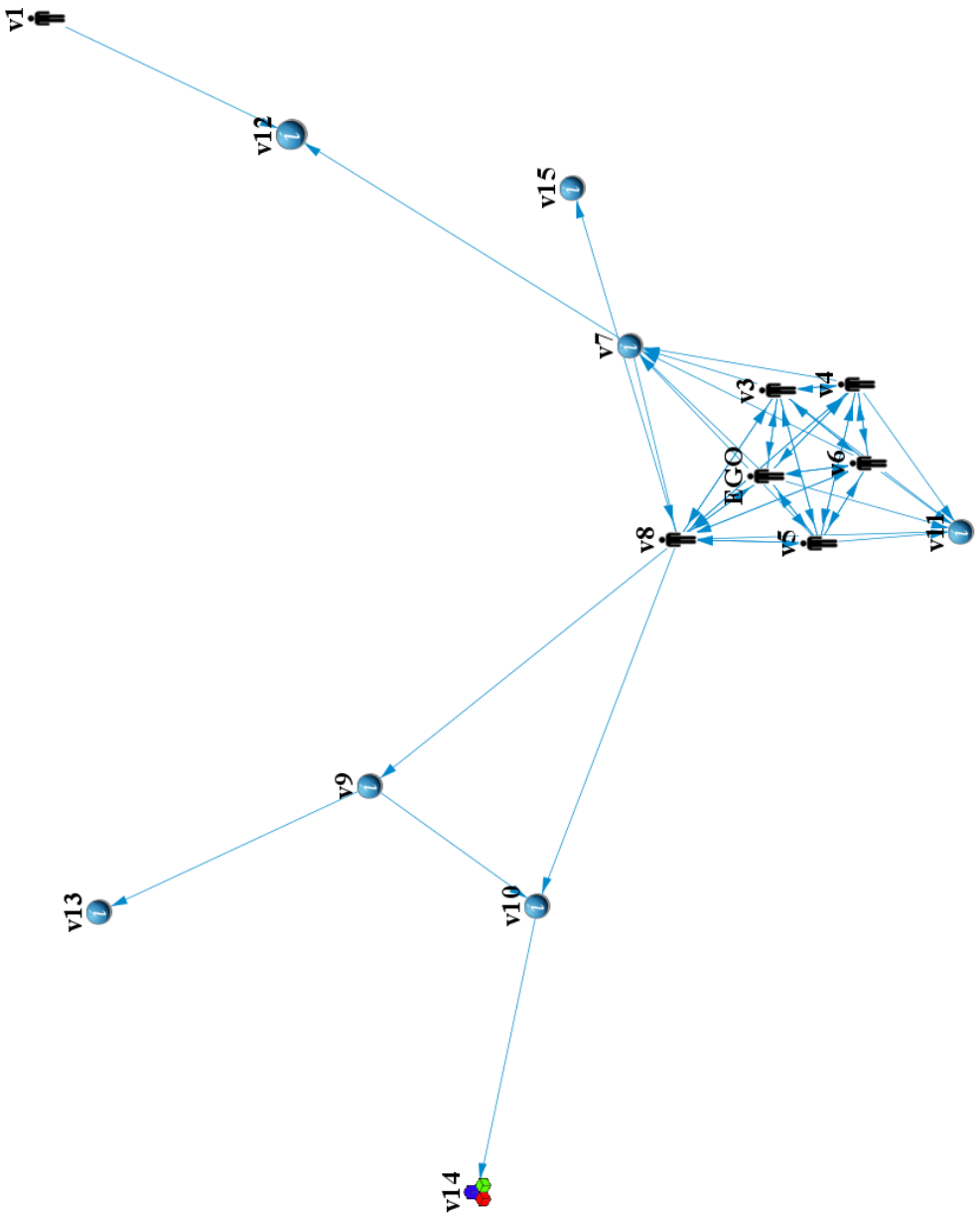


Visualisation 35.2: Moorhead 1983, Model Two - vertext count=25, link count=53, density=0.088

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19	v20	v21	v22	v23	v24	v25
EGO	0	0	0	1	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
v2	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	0	0	0	0	0	0
v3	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	0	0	0	0	0	0
v4	1	0	0	0	1	1	0	0	0	1	0	1	0	0	0	0	1	1	1	0	0	0	0	0	0
v5	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	1	1	1	0	0	0	0	0	0
v6	1	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 35.2: Moorhead 1983, Model Two - binary matrix

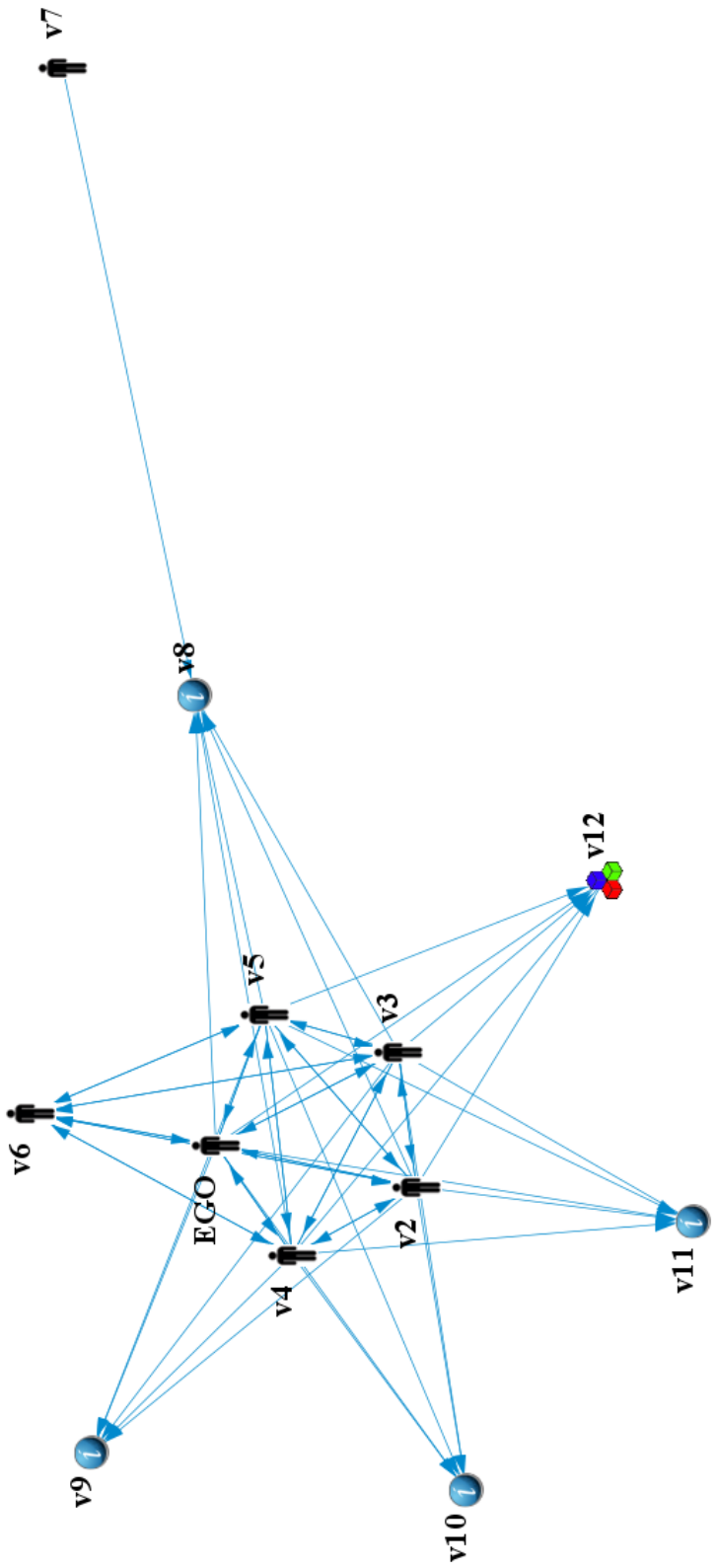
36. Myers 1993



Visualisation 36.1: Myers 1993, Model One - vertex count=15, link count=50, density=0.238

	v1	EGO	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15
v1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
EGO	0	0	2	2	2	2	1	2	0	0	1	0	0	0	0
v3	0	2	0	2	2	2	1	2	0	0	1	0	0	0	0
v4	0	2	2	0	2	2	1	2	0	0	1	0	0	0	0
v5	0	2	2	2	0	2	1	2	0	0	1	0	0	0	0
v6	0	2	2	2	2	0	1	2	0	0	1	0	0	0	0
v7	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
v8	0	2	2	2	2	2	0	0	1	1	0	0	0	0	1
v9	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v11	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 36.1: Myers 1993, Model One - weighted matrix

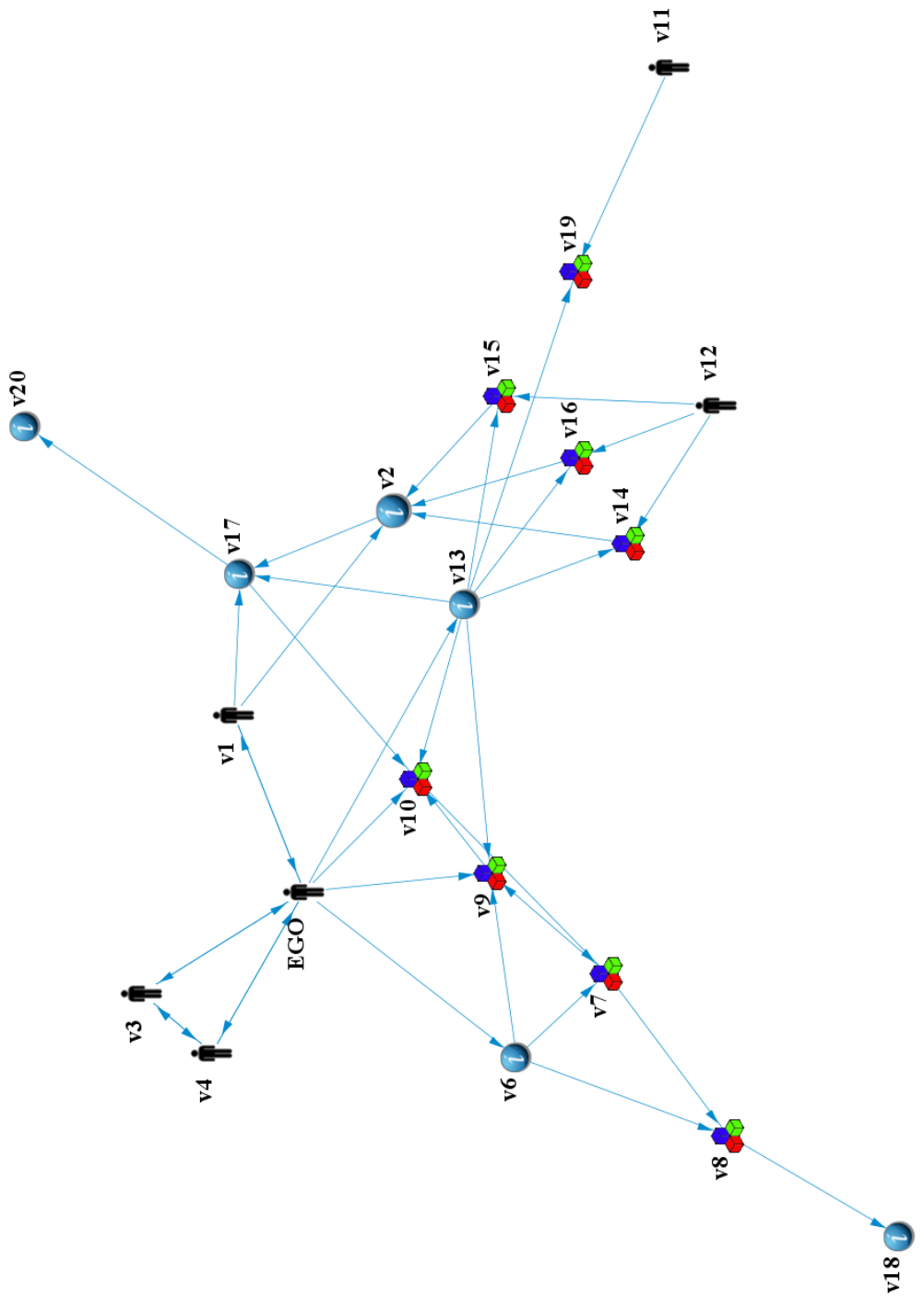


Visualisation 36.2: Myers 1993, Model Two - vertext count=12, link count=56, density=0.424

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12
EGO	0	1	1	1	1	1	0	1	1	1	1	1
v2	1	0	1	1	1	1	0	1	1	1	1	1
v3	1	1	0	1	1	1	0	1	1	1	1	1
v4	1	1	1	0	1	1	0	1	1	1	1	1
v5	1	1	1	1	0	1	0	1	1	1	1	1
v6	1	1	1	1	1	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	1	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 36.2: Myers 1993, Model Two - binary matrix

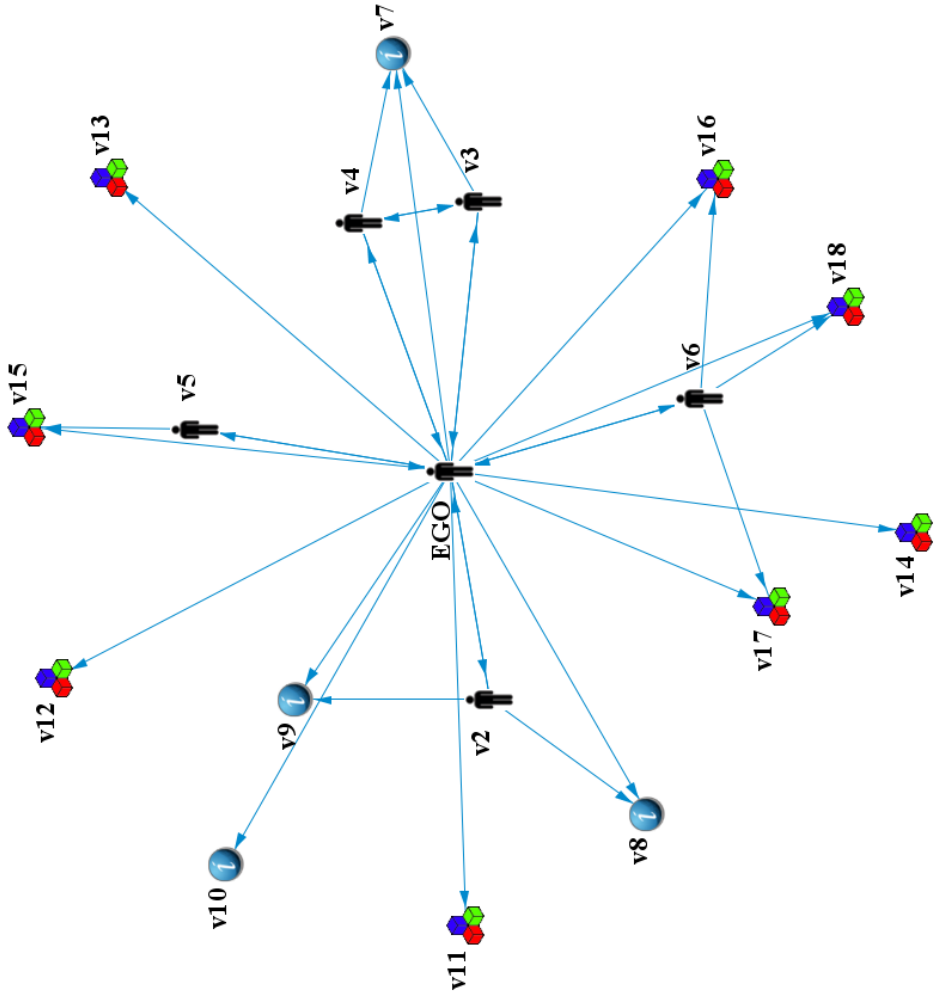
37. Niswender 1980



Visualisation 37.1: Niswender 1980, Model One - vertex count=20, link count=39, density=0.103

	v1	v2	v3	v4	EGO	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19	v20
v1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
v3	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v4	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EGO	1	0	1	1	0	1	0	0	1	1	0	0	1	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v9	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0
v13	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	1	1	0	1	0
v14	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 37.1: Niswender 1980, Model One - weighted matrix

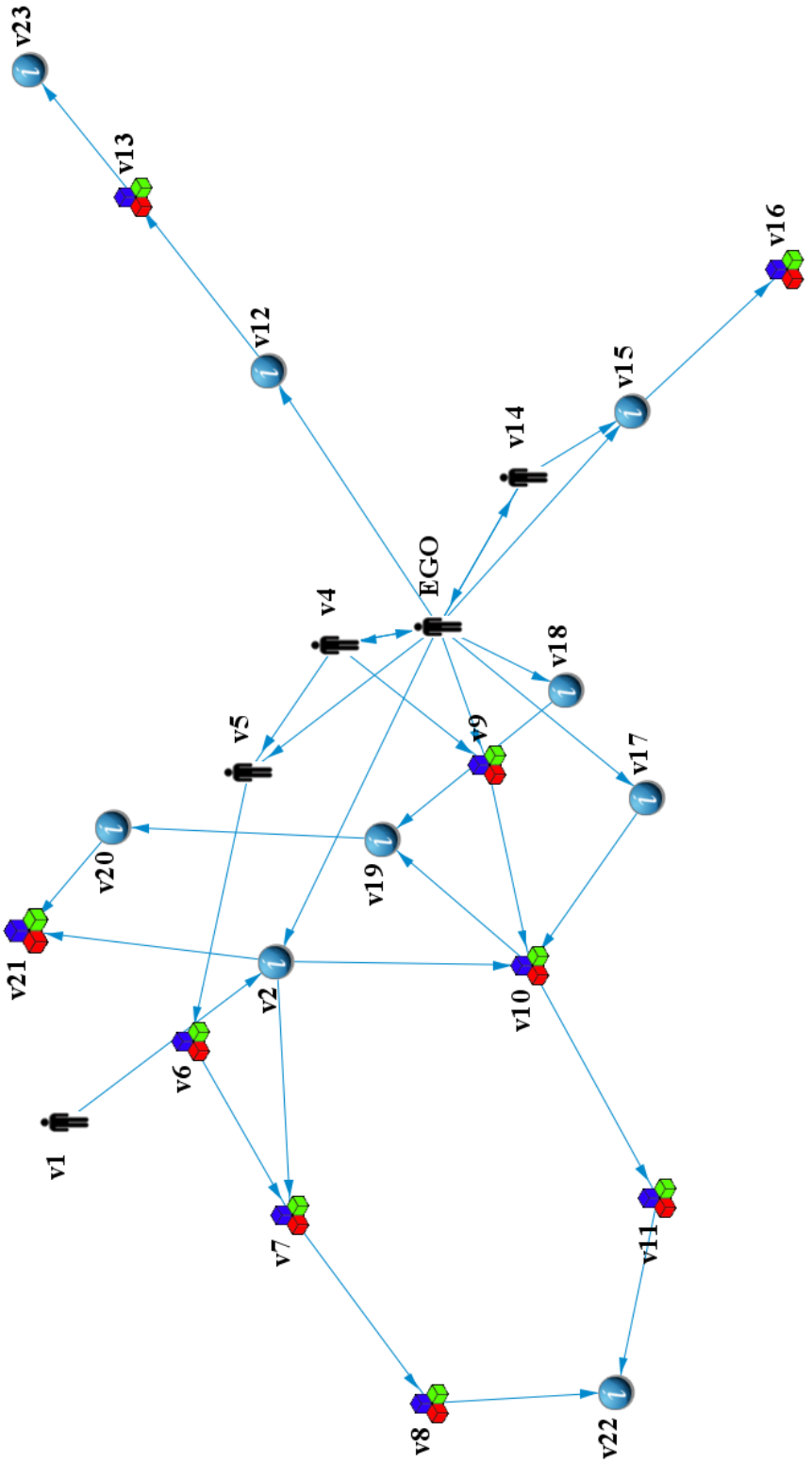


Visualisation 37.2: Niswender 1980, Model Two - vertext count=18, link count=32, density=0.105

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18
EGO	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
v2	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
v3	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
v4	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
v5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
v7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 37.2: Niswender 1980, Model Two - binary matrix

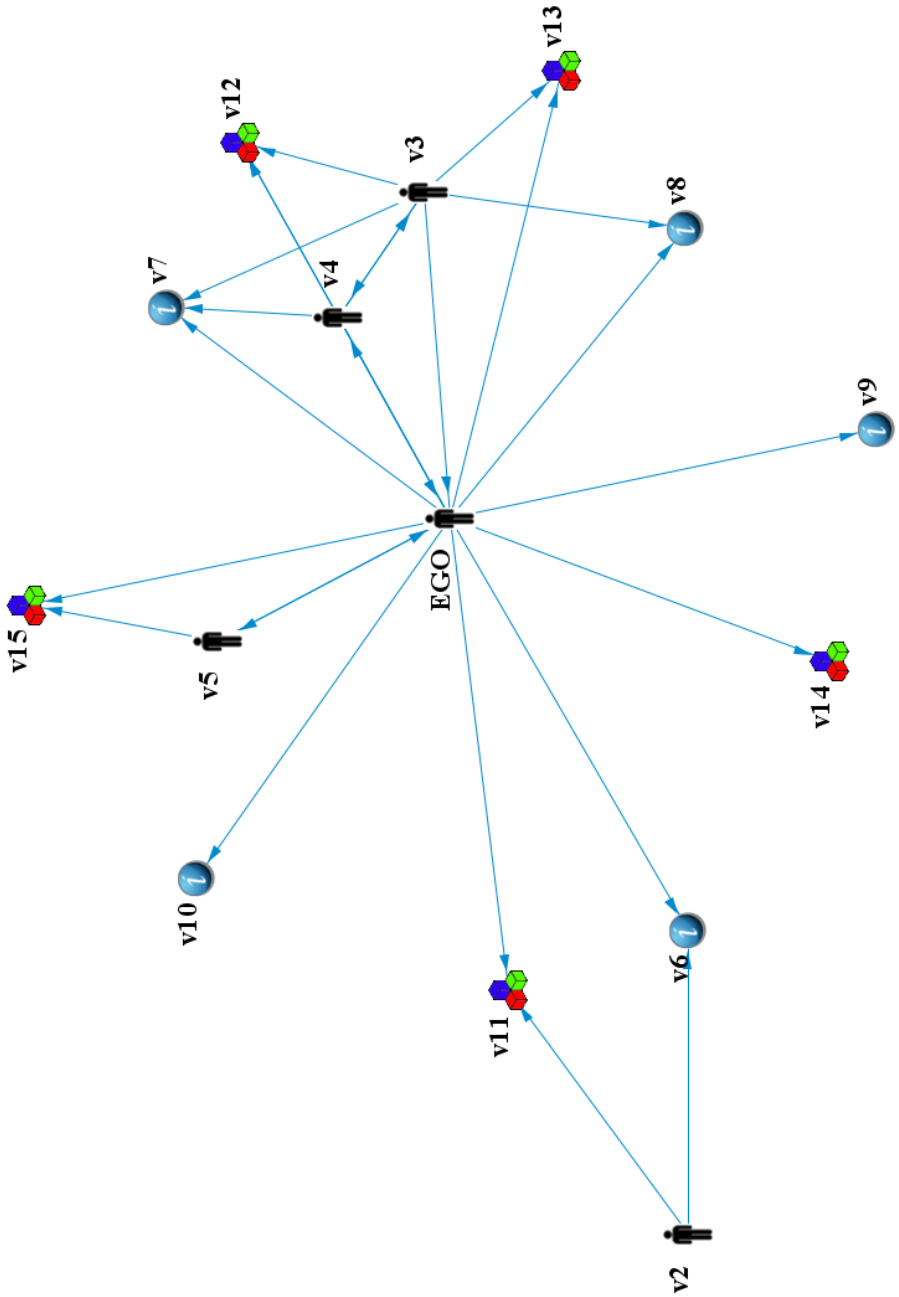
38. Nowell 1977



Visualisation 38.1: Nowell 1977, Model One - vertex count=23, link count=33, density=0.06$_5$

	v1	EGO	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19	v20	v21	v22	v23
v1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0
EGO	0	1	0	1	1	0	0	0	1	0	0	1	0	1	1	0	1	1	0	0	0	0	0
v4	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v5	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v9	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v14	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 38.1: Nowell 1977, Model One - weighted matrix

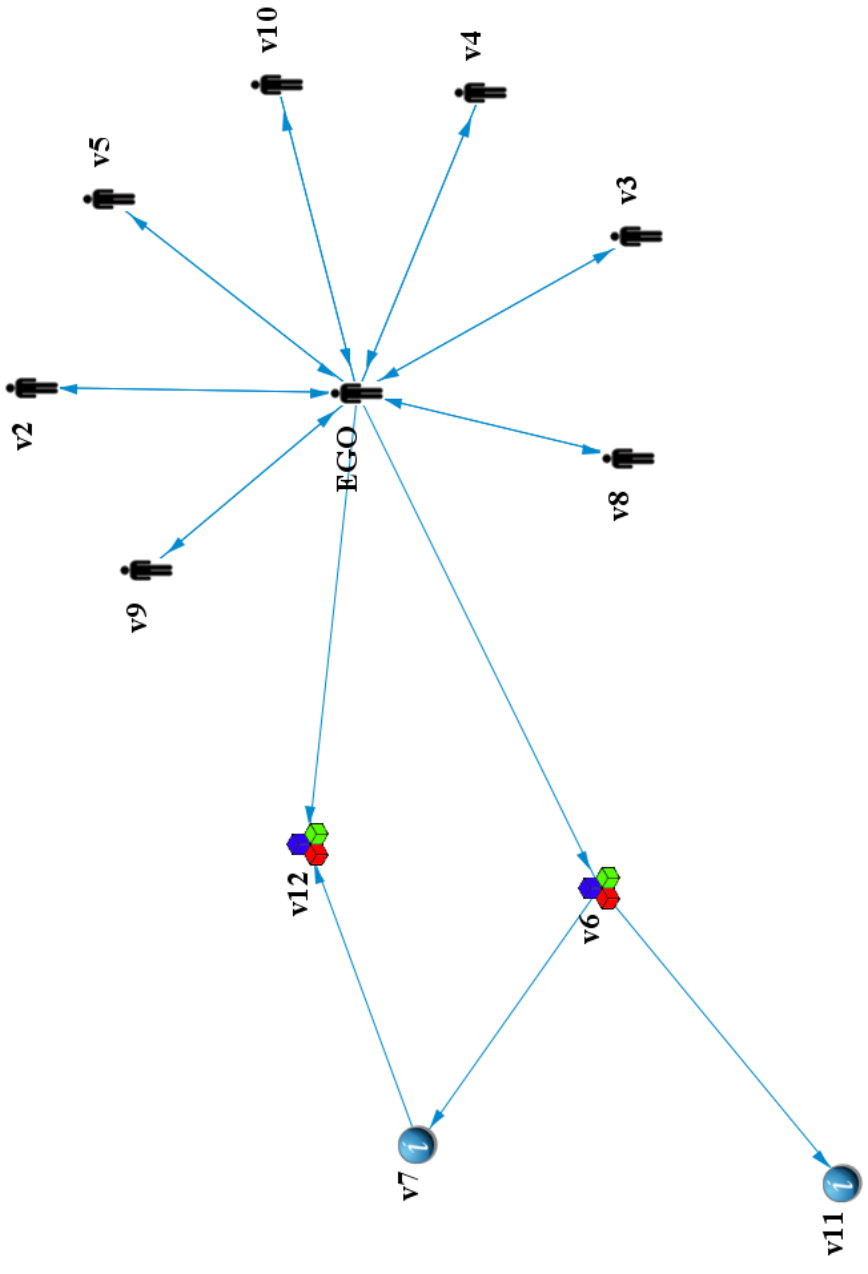


Visualisation 38.2: Nowell 1977, Model Two - vertext count=15, link count=26, density=0.124

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15
EGO	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1
v2	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
v3	1	0	1	1	0	0	1	1	0	0	0	1	1	0	0
v4	1	0	1	0	0	0	1	0	0	0	0	1	0	0	0
v5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 38.2: Nowell 1977, Model Two - binary matrix

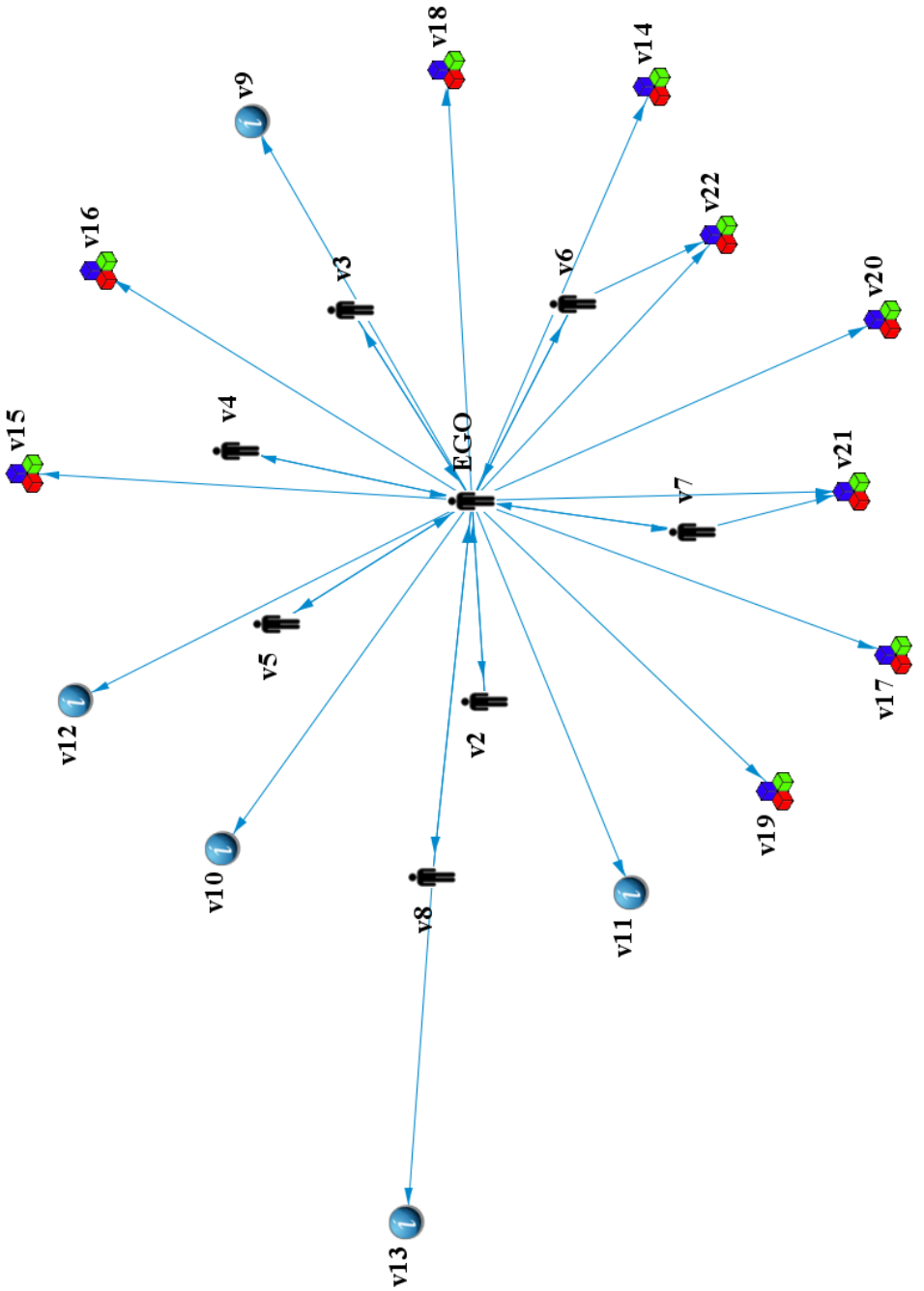
39. Pedersen 1985



Visualisation 39.1: Pedersen 1985, Model One - vertex count=12, link count=19, density=0.144

	v1	v2	v3	v4	v5	v6	EGO	v8	v9	v10	v11	v12
EGO	0	2	2	2	2	1	0	1	1	1	0	1
v2	2	0	0	0	0	0	0	0	0	0	0	0
v3	2	0	0	0	0	0	0	0	0	0	0	0
v4	2	0	0	0	0	0	0	0	0	0	0	0
v5	2	0	0	0	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	1	0	0	0	1	0
v7	0	0	0	0	0	0	0	0	0	0	0	1
v8	1	0	0	0	0	0	0	0	0	0	0	0
v9	1	0	0	0	0	0	0	0	0	0	0	0
v10	1	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 39.1: Pedersen 1985, Model One - weighted matrix

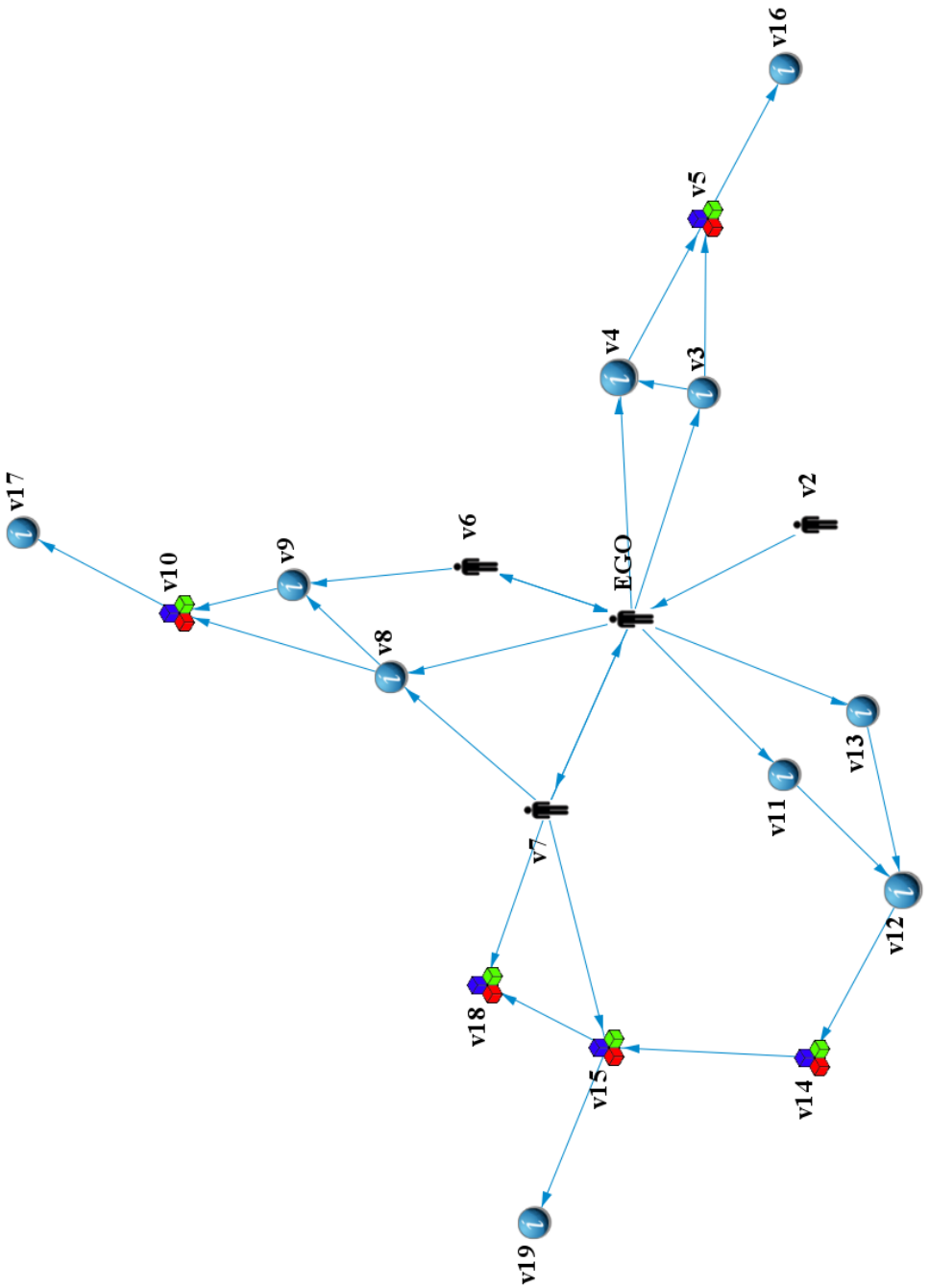


Visualisation 39.2: Pedersen 1985, Model Two - vertext count=22, link count=30, density=0.065

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19	v20	v21	v22
EGO	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
v2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v8	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 39.2: Pedersen 1985, Model Two - binary matrix

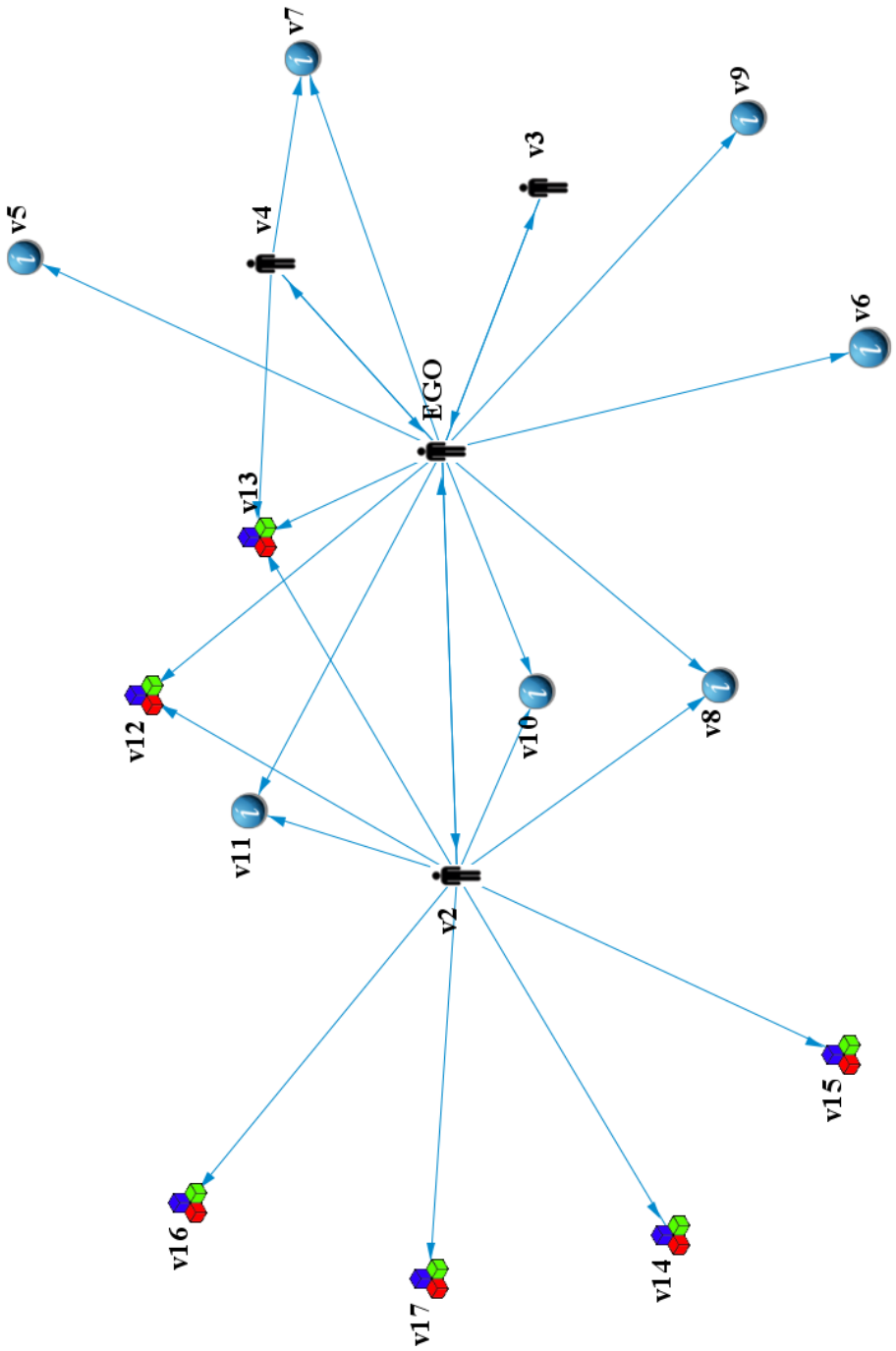
40. Poulik 1984



Visualisation 40.1: Poulik 1984, Model One - vertex count=19, link count=28, density=0.08$_2$

	v1	v2	v3	v4	v5	EGO	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19
EGO	0	0	1	1	0	1	2	1	0	0	1	0	1	0	0	0	0	0	0
v2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v3	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v4	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v6	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
v7	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0
v8	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 40.1: Poulik 1984, Model One - weighted matrix

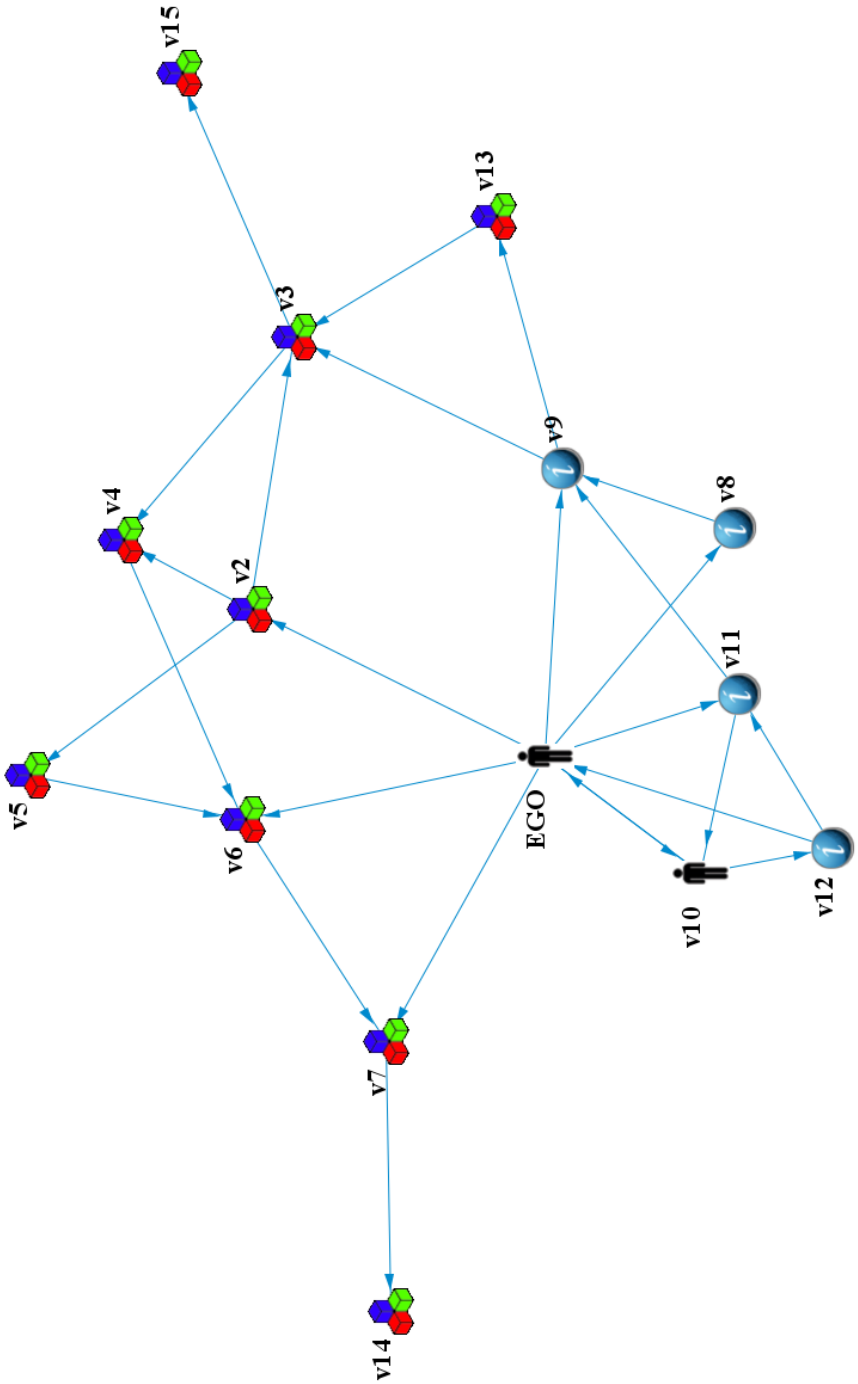


Visualisation 40.2: Poulik 1984, Model Two - vertext count=17, link count=26, density=0.09*6*

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17
EGO	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
v2	1	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1
v3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v4	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
v5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 40.2: Poulik 1984, Model Two - binary matrix

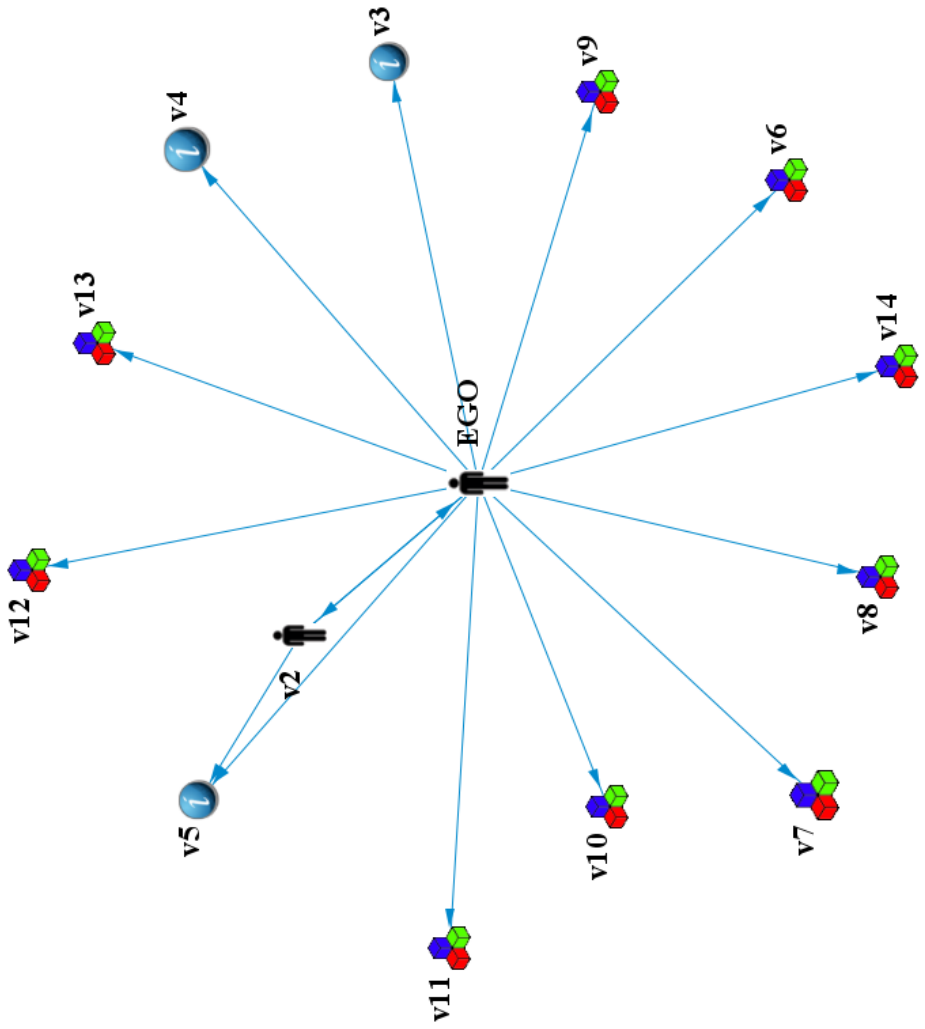
41. Reynolds 1981



Visualisation 41.1: Reynolds 1981, Model One - vertex count=15, link count=26, density=0.12$_4$

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15
EGO	0	1	0	0	0	1	1	1	1	1	1	0	0	0	0
v2	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0
v3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
v4	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
v5	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v8	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
v9	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0
v10	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v11	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
v12	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
v13	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 41.1: Reynolds 1981, Model One - weighted matrix

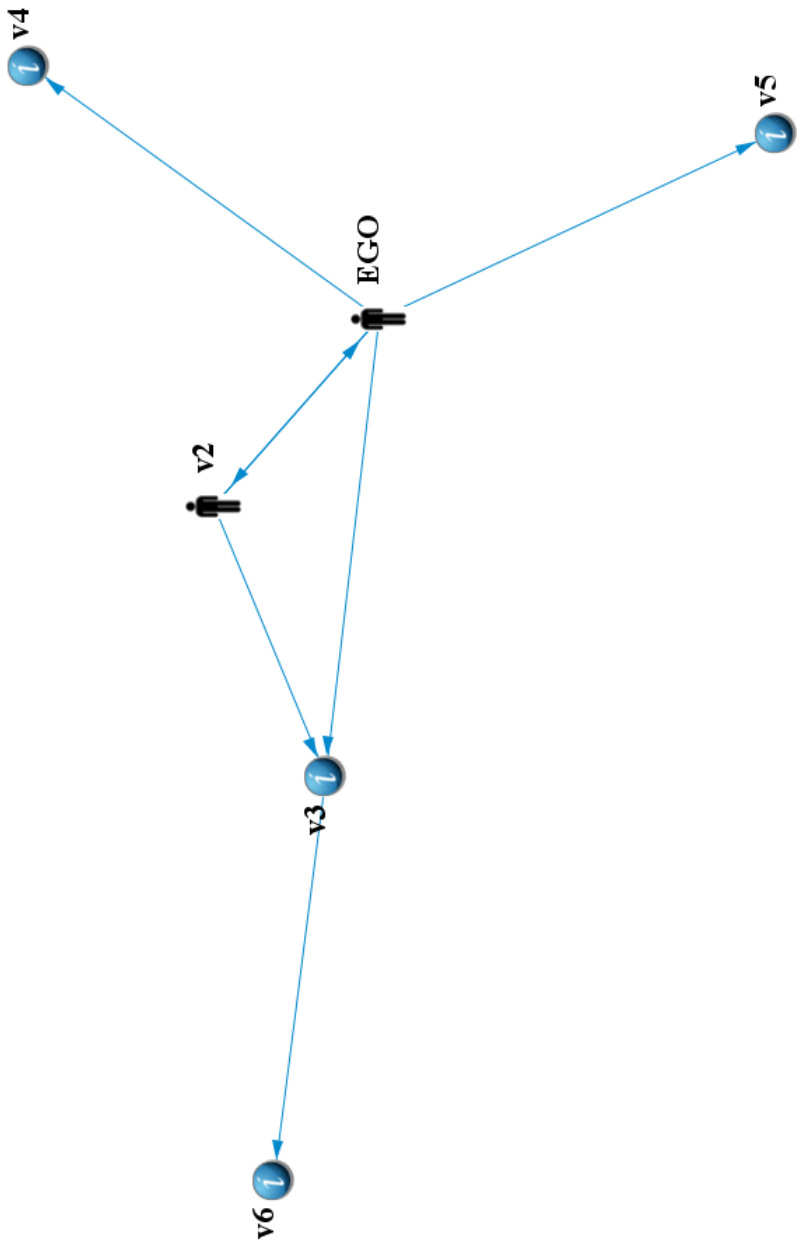


Visualisation 41.2: Reynolds 1981, Model Two - vertext count=14, link count=15, density=0.08$2$

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14
EGO	0	1	1	1	1	1	1	1	1	1	1	1	1	1
v2	1	0	0	0	1	0	0	0	0	0	0	0	0	0
v3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 41.2: Reynolds 1981, Model Two - binary matrix

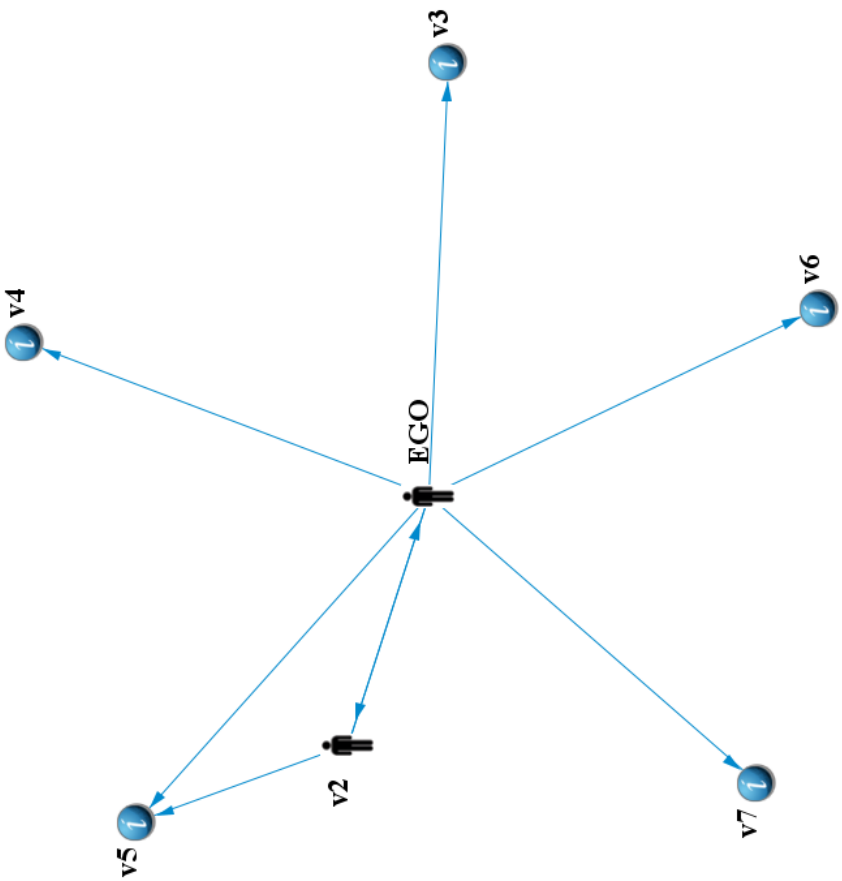
42. Schaefer 1981



Visualisation 42.1: Schaefer 1981, Model One - vertex count=6, link count=7, density=0.23[3]

	EGO	v2	v3	v4	v5	v6
EGO	0	1	2	1	1	0
v2	1	0	1	0	0	0
v3	0	0	0	0	0	1
v4	0	0	0	0	0	0
v5	0	0	0	0	0	0
v6	0	0	0	0	0	0

Matrix 42.1: Schaefer 1981, Model One - weighted matrix

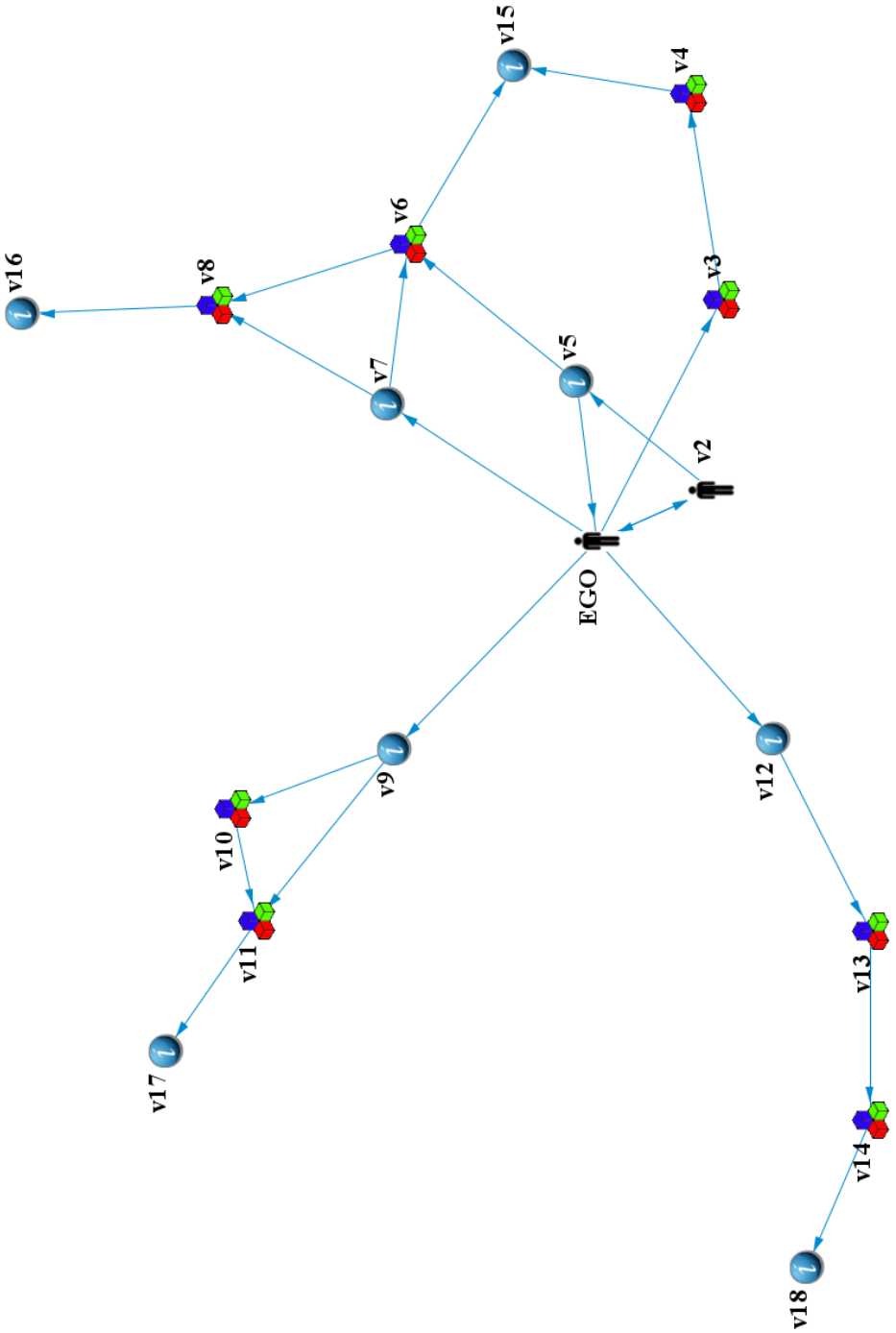


Visualisation 42.2: Schaefer 1981, Model Two - vertext count=7, link count=8, density=0.19*1*

	EGO	v2	v3	v4	v5	v6	v7
EGO	0	1	1	1	1	1	1
v2	1	0	0	0	1	0	0
v3	0	0	0	0	0	0	0
v4	0	0	0	0	0	0	0
v5	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0

Matrix 42.2: Schaefer 1981, Model Two - binary matrix

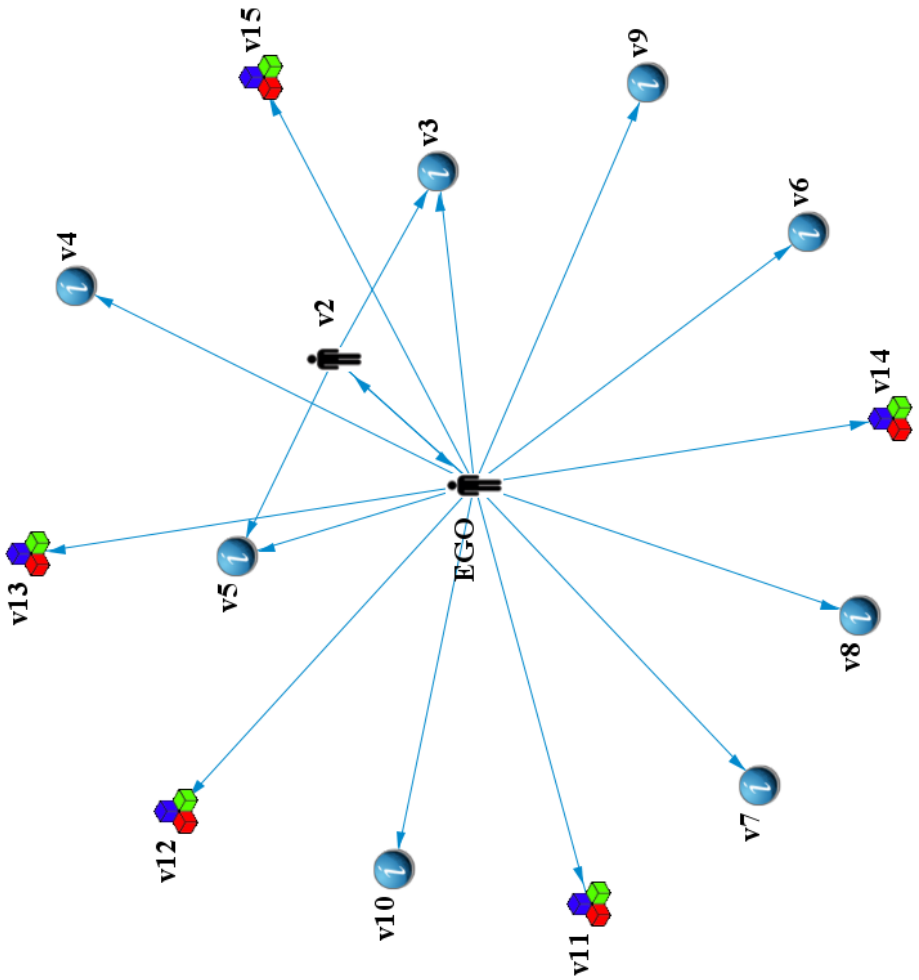
43. Schatzmann 1984



Visualisation 43.1: Schatzmann 1984, Model One - vertex count=18, link count=23, density=0.075

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18
EGO	0	1	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0
v2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
v3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v5	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0
v7	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v9	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 43.1: Schatzmann 1984, Model One - weighted matrix

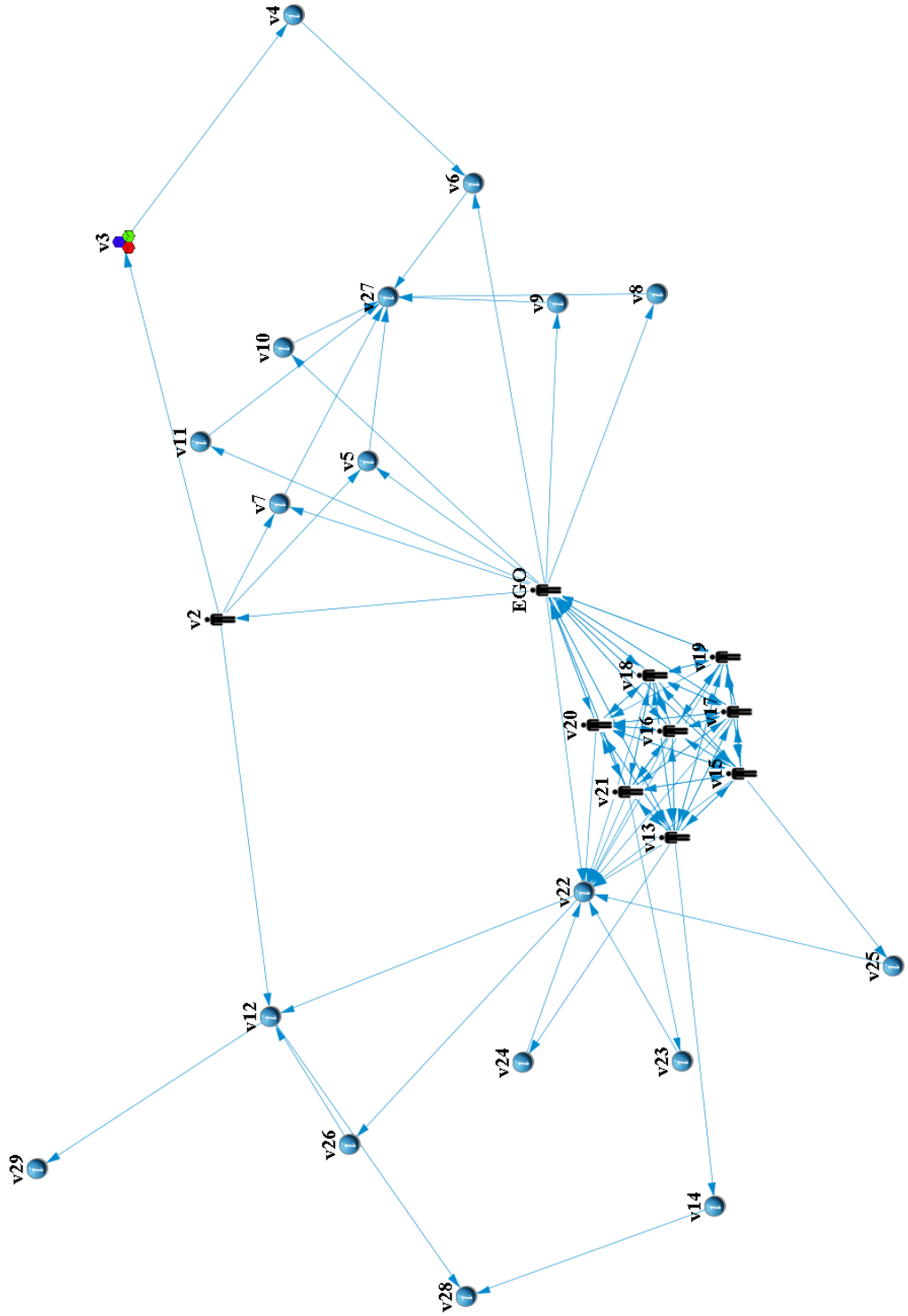


Visualisation 43.2: Schatzmann 1984, Model Two - vertext count=15, link count=17, density=0.081

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15
EGO	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
v2	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0
v3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 43.2: Schatzmann 1984, Model Two - binary matrix

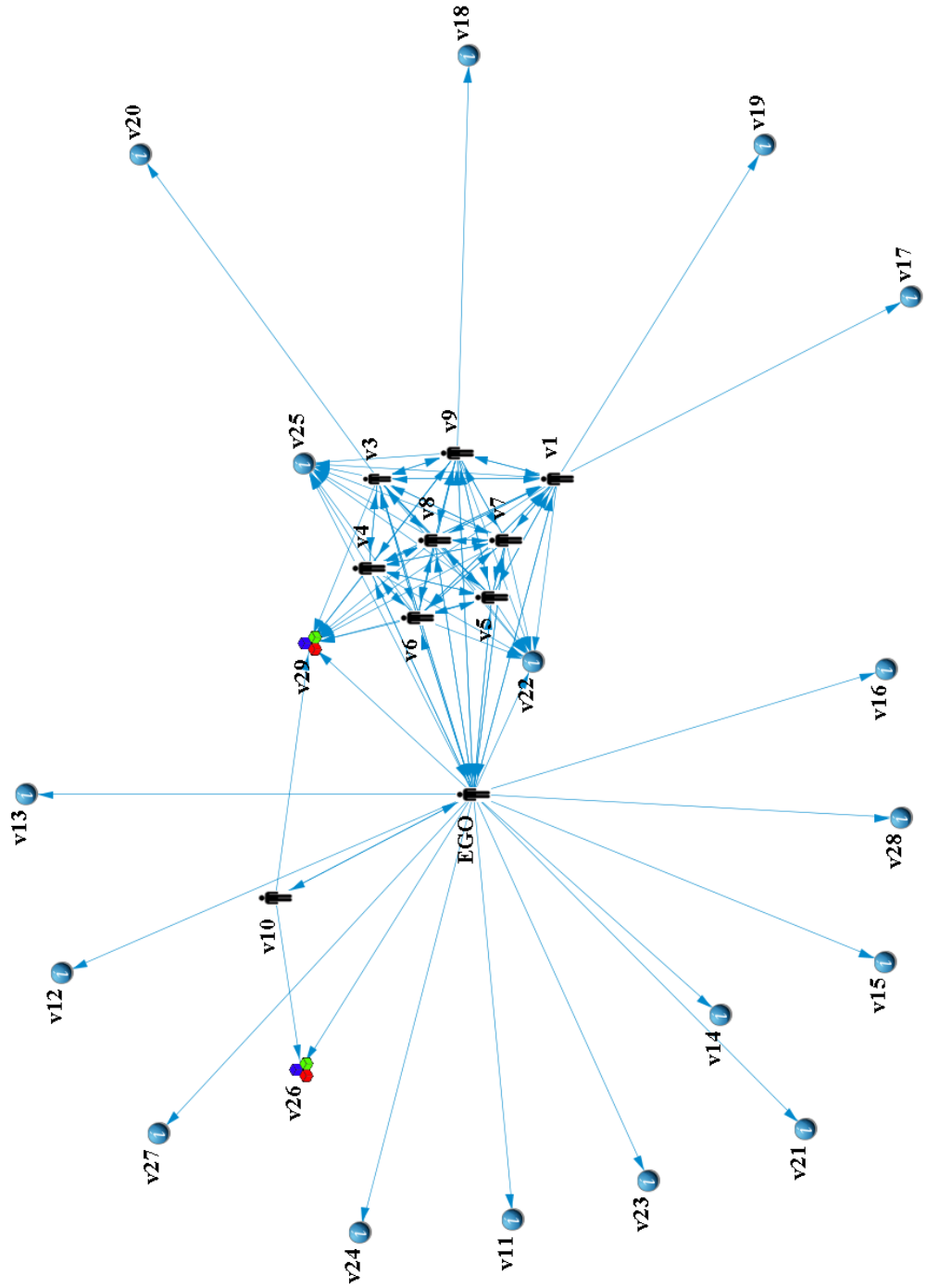
44. Smythe 1980



Visualisation 44.1: Smythe 1980, Model One - vertex count=29, link count=113, density=0.139

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19	v20	v21	v22	v23	v24	v25	v26	v27	v28	v29
EGO	0	2	0	0	1	1	1	1	1	1	1	0	2	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
v2	0	0	1	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v4	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
v13	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v15	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	1	1	1	1	0	0	1	0	0	0	0
v16	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	1	1	1	1	0	0	0	0	0	0	0
v17	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0
v18	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0
v19	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	0	1	1	1	0	0	0	0	0	0	0
v20	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0
v21	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	0	1	0	1	1	0	0	0	0	0	0
v22	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
v24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
v25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
v26	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 44.1: Smythe 1980, Model One - weighted matrix

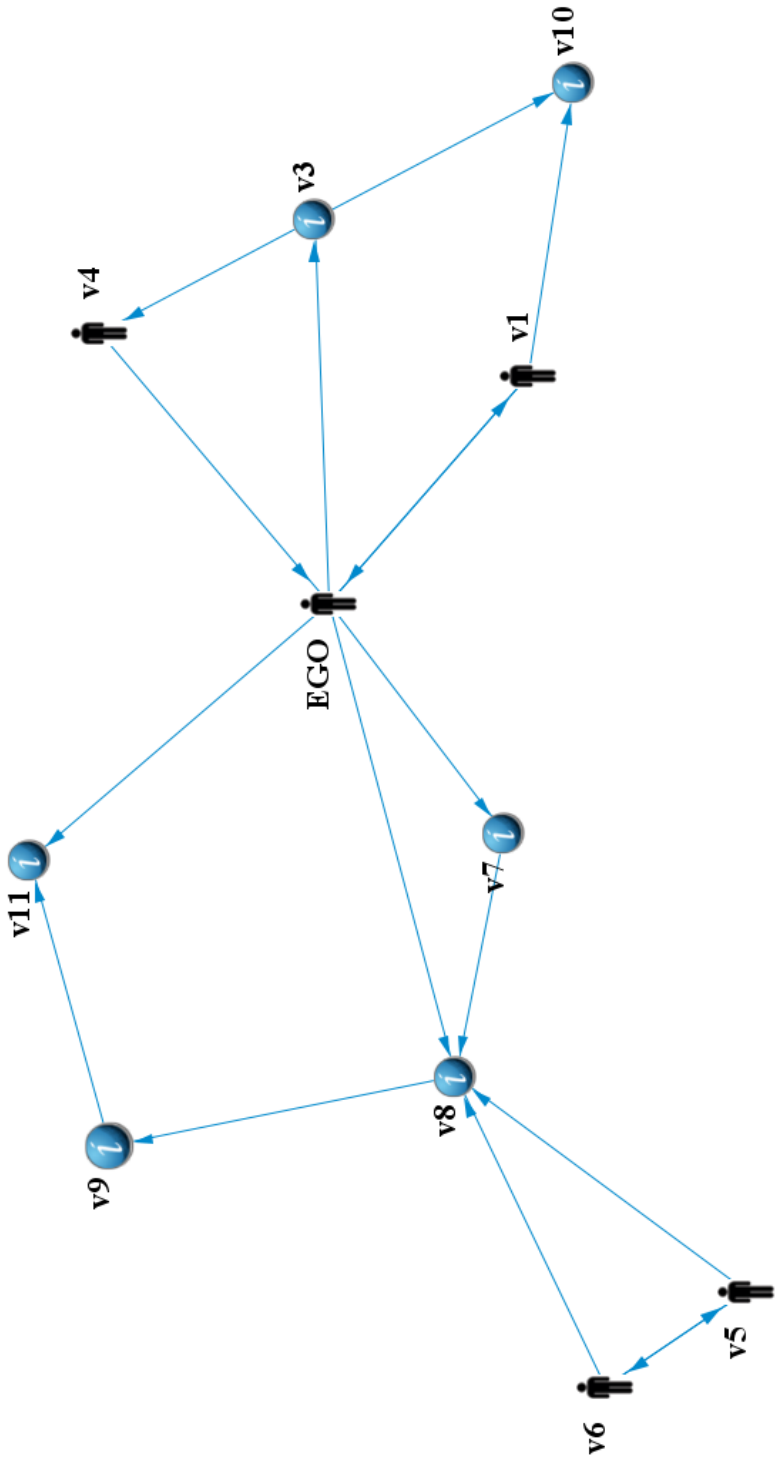


Visualisation 44.2: Smythe 1980, Model Two - vertext count=29, link count=119, density=0.147

	v1	EGO	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19	v20	v21	v22	v23	v24	v25	v26	v27	v28	v29
v1	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	1	0	1
EGO	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1
v3	1	1	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1
v4	1	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1
v5	1	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1
v6	1	1	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1
v7	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1
v8	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1
v9	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1
v10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 44.2: Smythe 1980, Model Two - binary matrix

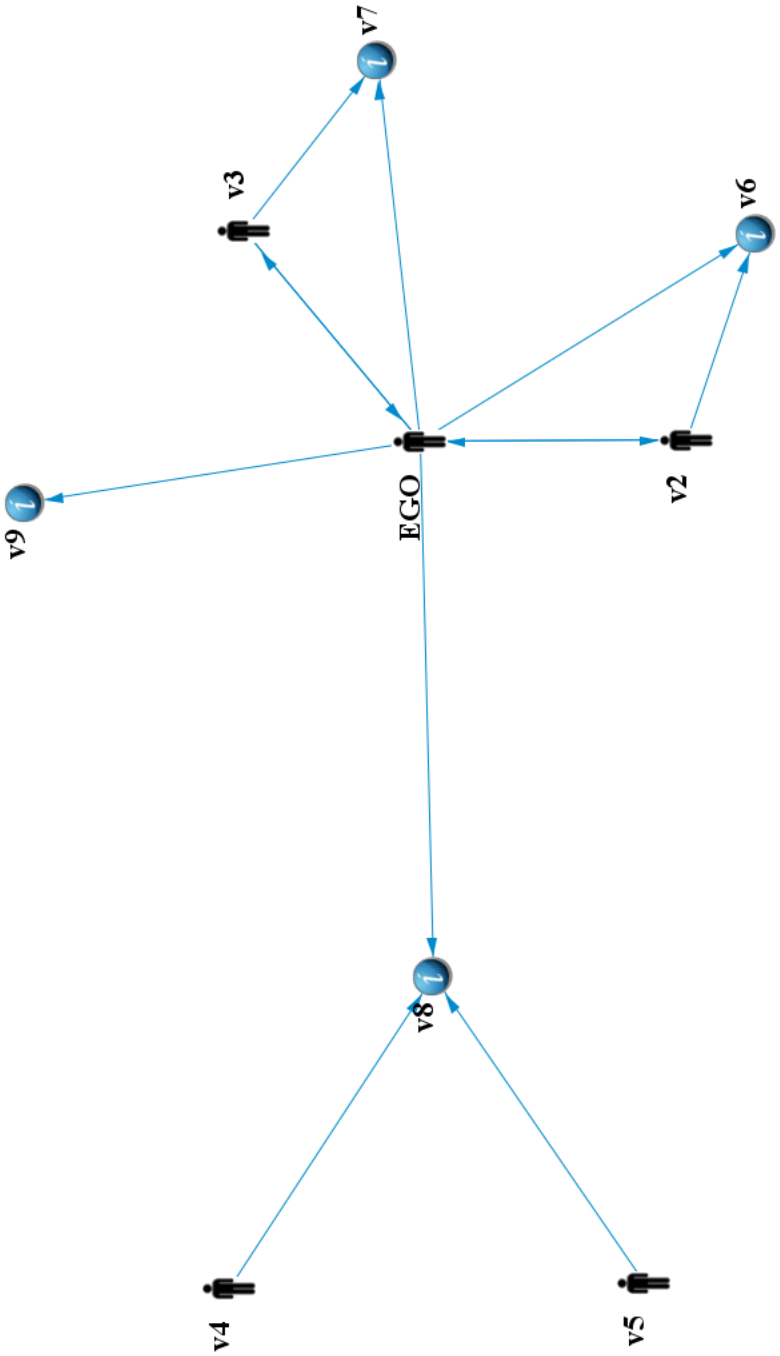
45. Sussman 1990



Visualisation 45.1: Sussman 1990, Model One - vertex count=11, link count=17, density=0.155

	v1	EGO	v3	v4	v5	v6	v7	v8	v9	v10	v11
v1	0	1	0	0	0	0	0	0	0	1	0
EGO	1	0	1	0	0	0	1	1	0	0	1
v3	0	0	0	1	0	0	0	0	0	1	0
v4	0	1	0	0	0	0	0	0	0	0	0
v5	0	0	0	0	0	1	0	1	0	0	0
v6	0	0	0	0	1	0	0	1	0	0	0
v7	0	0	0	0	0	0	0	1	0	0	0
v8	0	0	0	0	0	0	0	0	1	0	0
v9	0	0	0	0	0	0	0	0	0	0	1
v10	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0

Matrix 45.1: Sussman 1990, Model One - weighted matrix

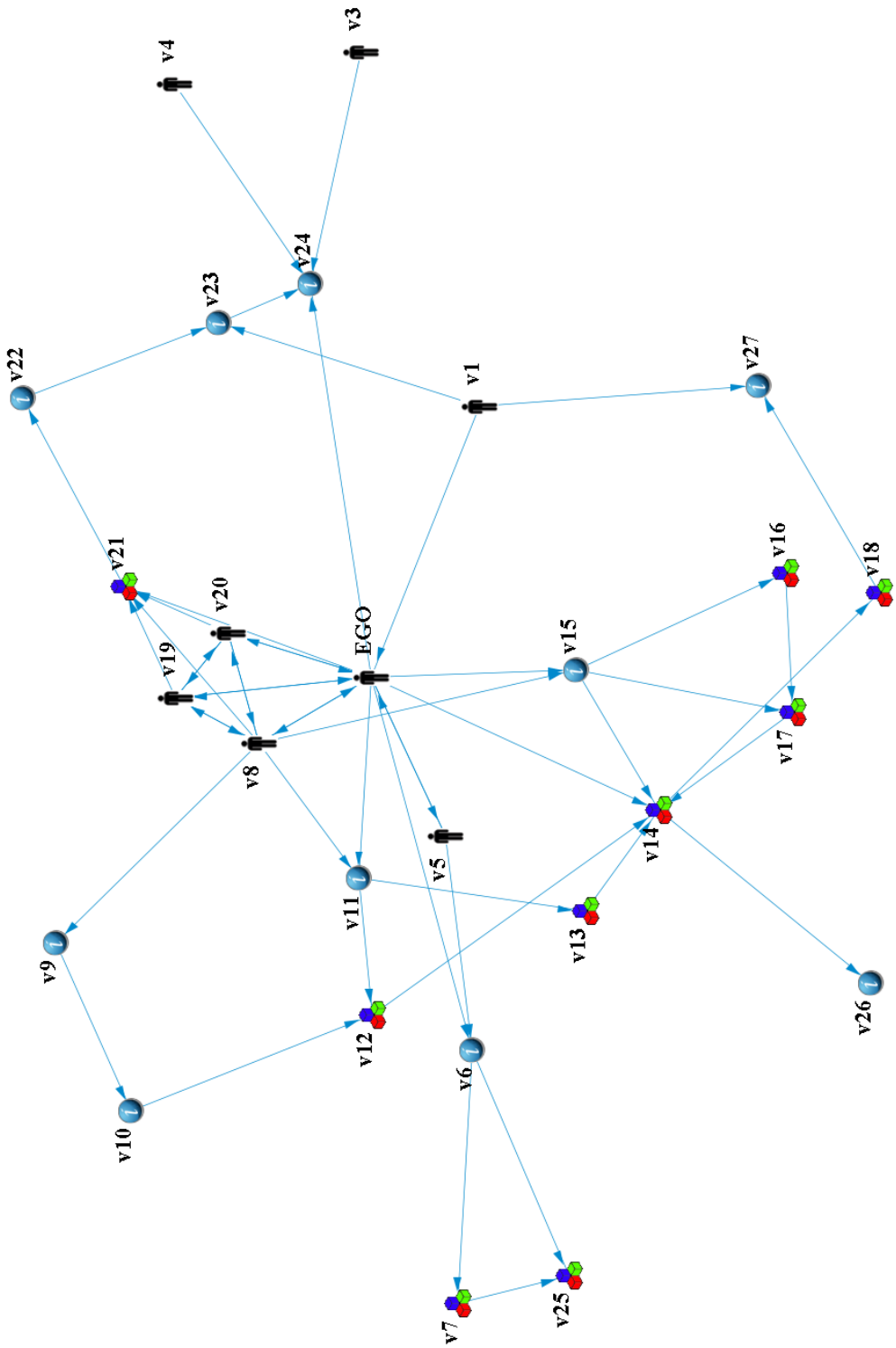


Visualisation 45.2: Sussman 1990, Model Two - vertext count=9, link count=12, density=0.167

	EGO	v2	v3	v4	v5	v6	v7	v8	v9
EGO	0	1	1	0	0	1	1	1	1
v2	1	0	0	0	0	1	0	0	0
v3	1	0	0	0	0	0	1	0	0
v4	0	0	0	0	0	0	0	1	0
v5	0	0	0	0	0	0	0	1	0
v6	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0

Matrix 45.2: Sussman 1990, Model Two - binary matrix

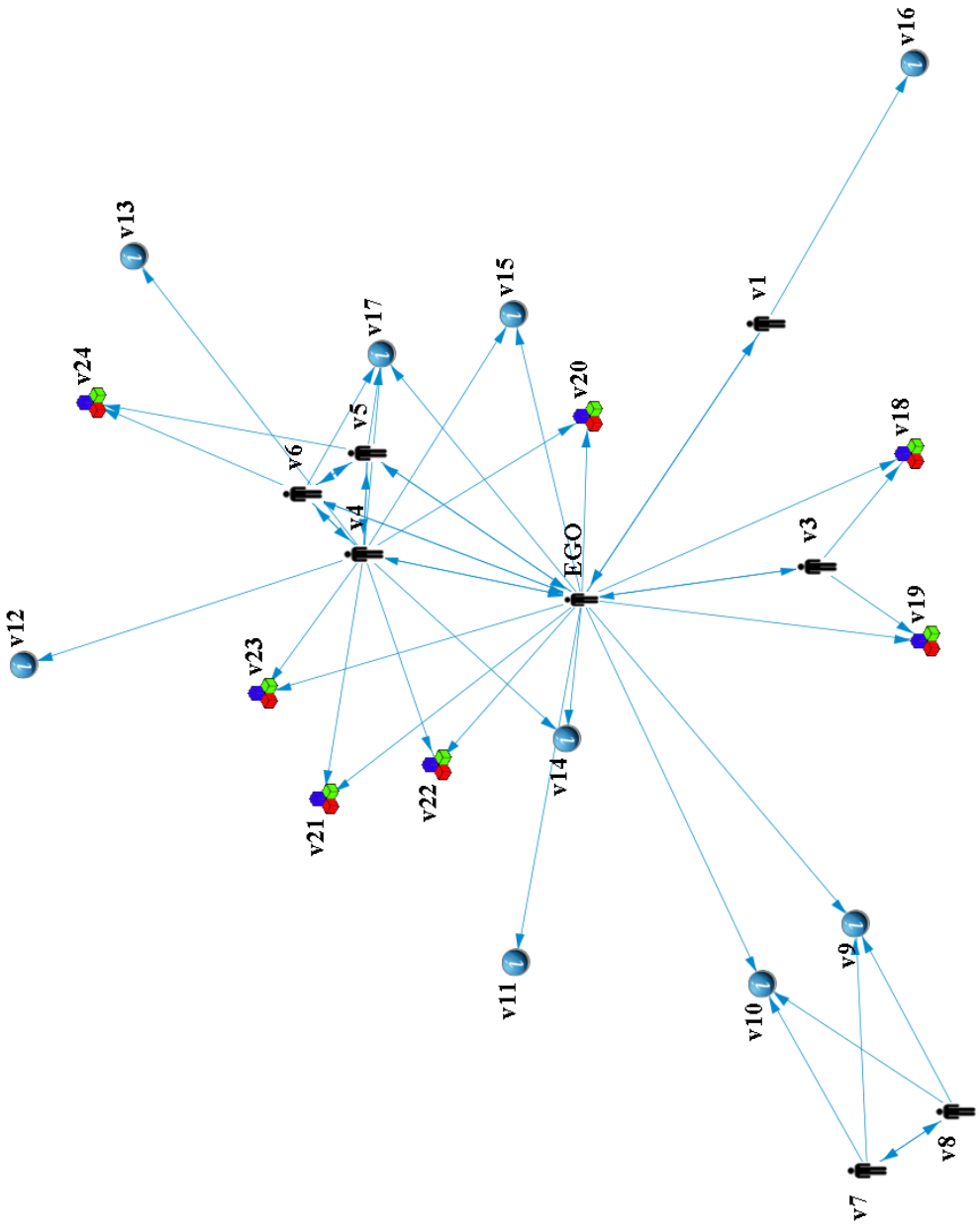
46. Warner 1977



Visualisation 46.1: Warner 1977, Model One - vertex count=27, link count=52, density=0.074

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19	v20	v21	v22	v23	v24	v25	v26	v27
v1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
EGO	0	0	0	0	1	1	0	4	0	0	1	0	0	1	1	0	0	0	1	1	1	0	0	1	0	0	0
v3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v5	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
v8	0	3	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	1	1	1	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v19	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
v20	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
v21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
v23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
v24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 46.1: Warner 1977, Model One - weighted matrix

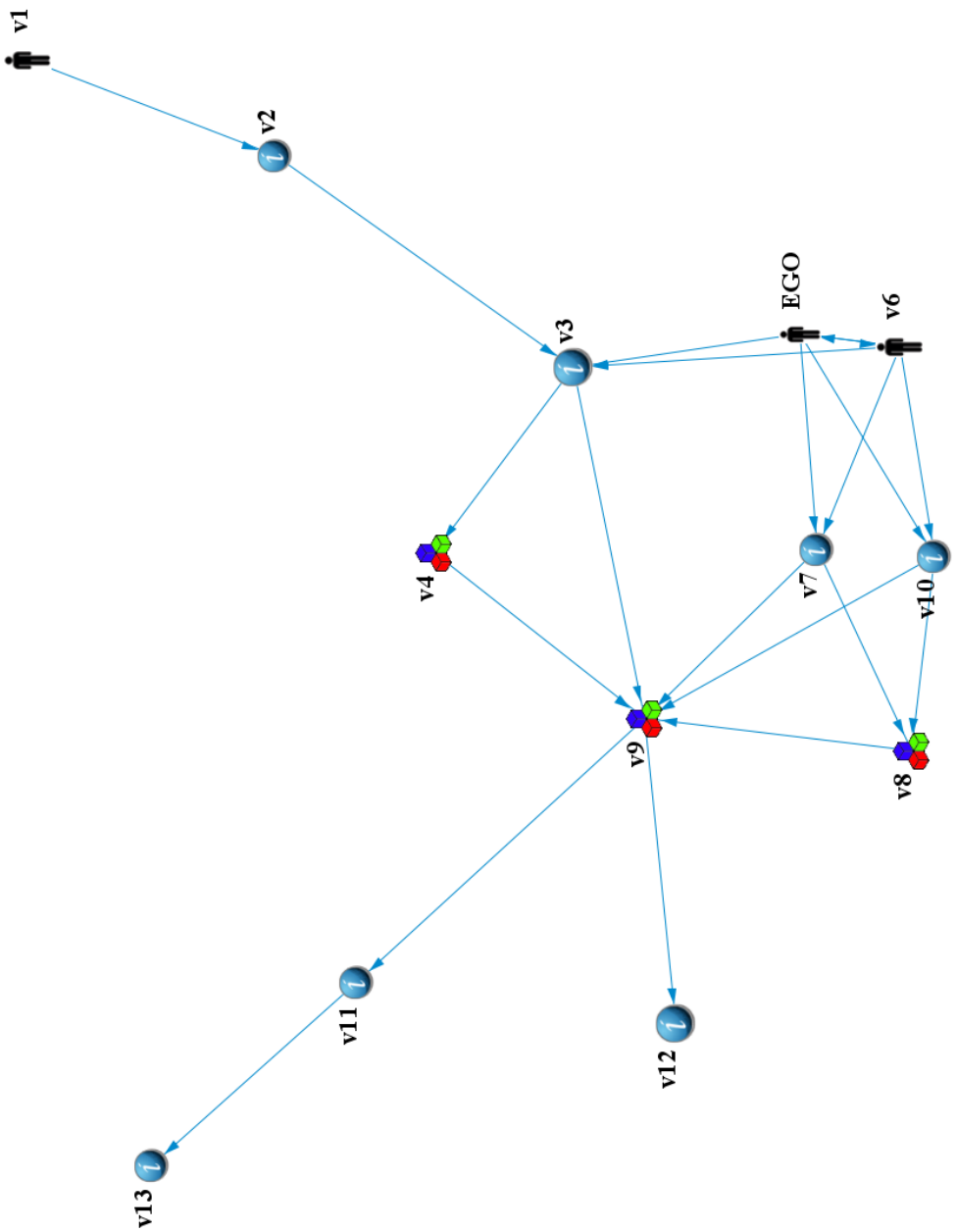


Visualisation 46.2: Warner 1977, Model Two - vertext count=24, link count=50, density=0.091

	v1	EGO	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19	v20	v21	v22	v23	v24
v1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
EGO	1	0	1	1	1	1	0	0	1	1	1	0	0	1	1	0	1	1	1	1	1	1	1	0
v3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
v4	0	1	0	0	1	1	0	0	0	0	0	1	1	1	1	0	1	0	0	1	1	1	1	0
v5	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
v6	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
v7	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 46.2: Warner 1977, Model Two - binary matrix

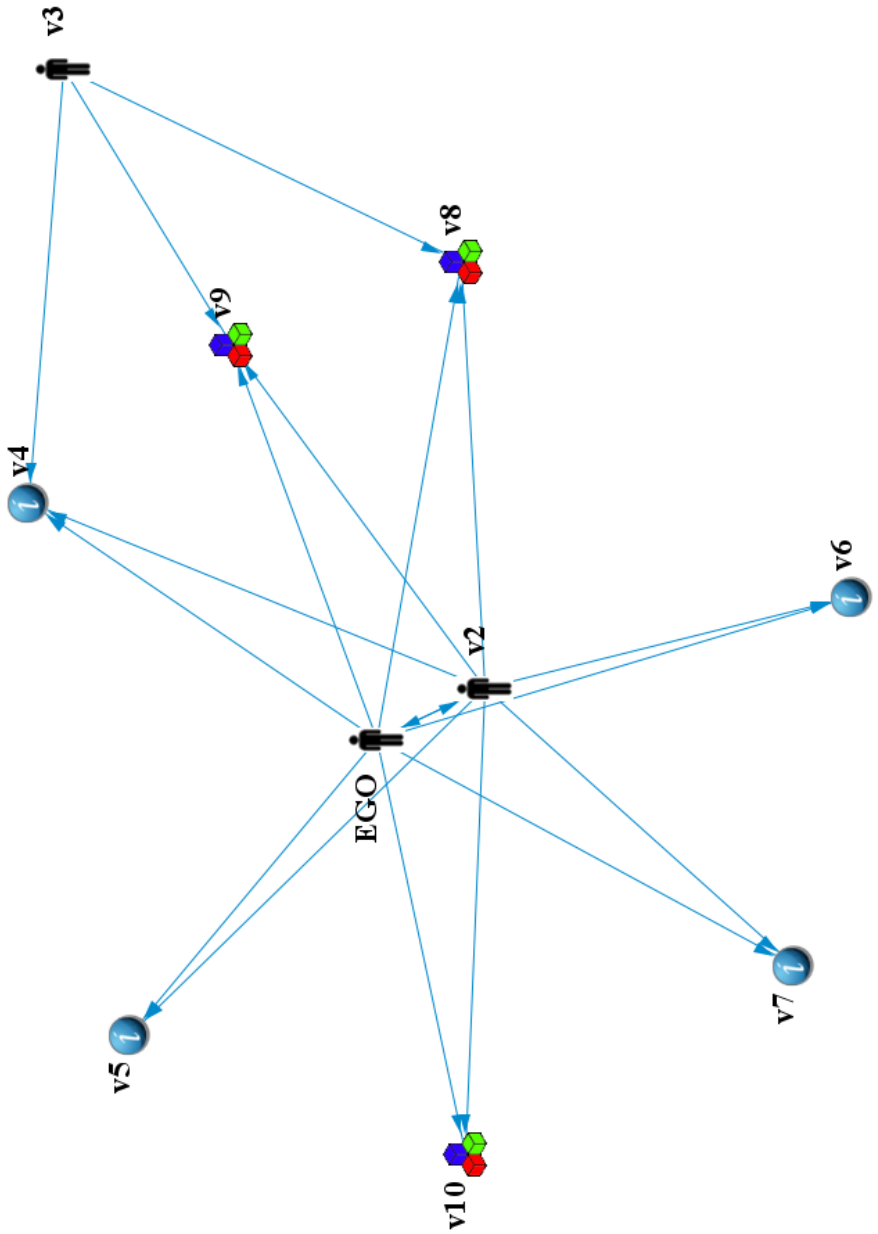
47. Weissman and Koe 1990 (1)



Visualisation 47.1: Weissman and Koe 1990 (1), Model One - vertex count=13, link count=21, density=0.135

	v1	v2	v3	v4	EGO	v6	v7	v8	v9	v10	v11	v12	v13
v1	0	1	0	0	0	0	0	0	0	0	0	0	0
v2	0	0	1	0	0	0	0	0	0	0	0	0	0
v3	0	0	0	1	0	0	0	0	1	0	0	0	0
v4	0	0	0	0	0	0	0	0	1	0	0	0	0
EGO	0	0	1	0	0	3	1	0	0	1	0	0	0
v6	0	0	1	0	3	0	1	0	0	1	0	0	0
v7	0	0	0	0	0	0	0	1	1	0	0	0	0
v8	0	0	0	0	0	0	0	0	2	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	1	1	0
v10	0	0	0	0	0	0	0	1	1	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	1
v12	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 47.1: Weissman and Koe 1990 (1), Model One - weighted matrix

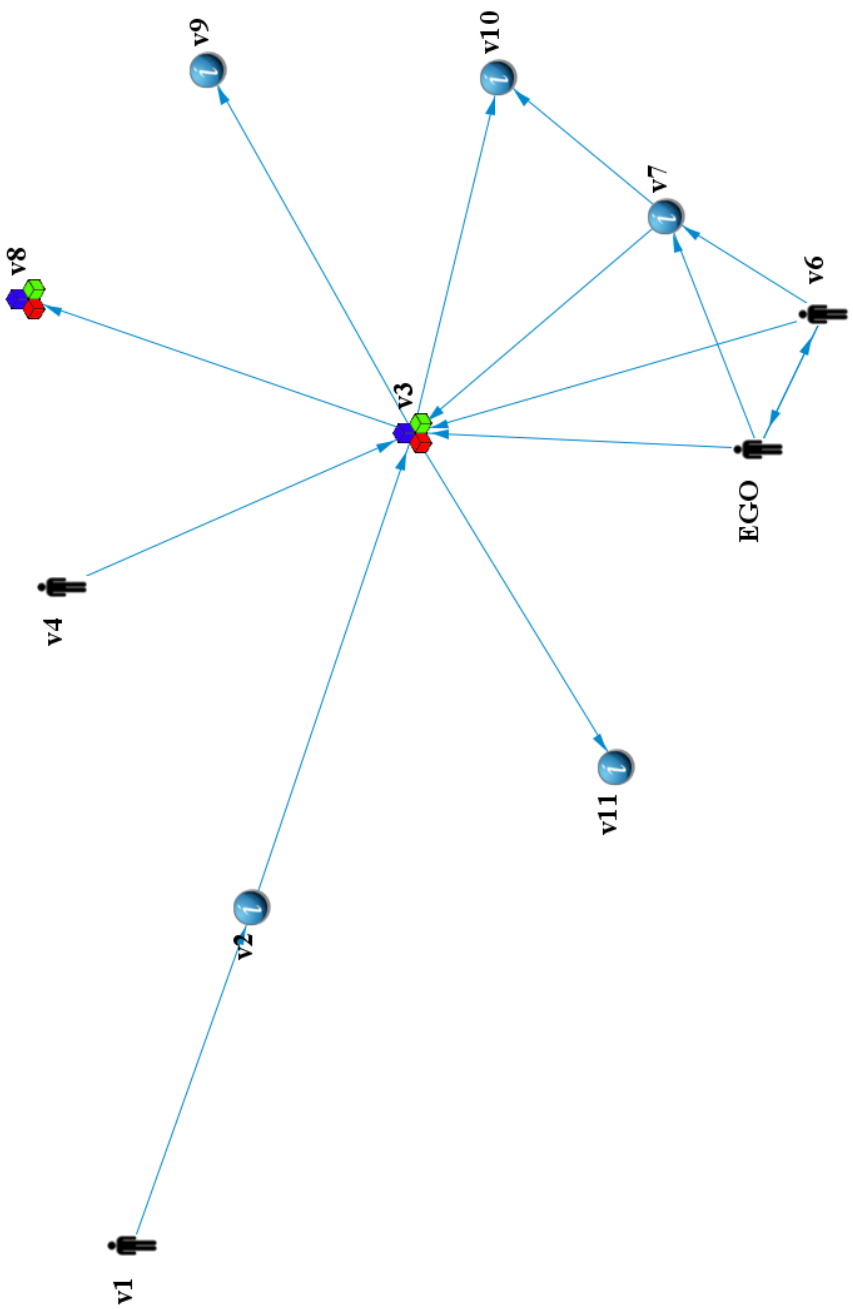


Visualisation 47.2: Weissman and Koe 1990 (1), Model Two - vertext count=10, link count=19, density=0.21

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10
EGO	0	1	0	1	1	1	1	1	1	1
v2	1	0	0	1	1	1	1	1	1	1
v3	0	0	0	1	0	0	0	1	1	0
v4	0	0	0	0	0	0	0	0	0	0
v5	0	0	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0

Matrix 47.2: Weissman and Koe 1990 (1), Model Two - binary matrix

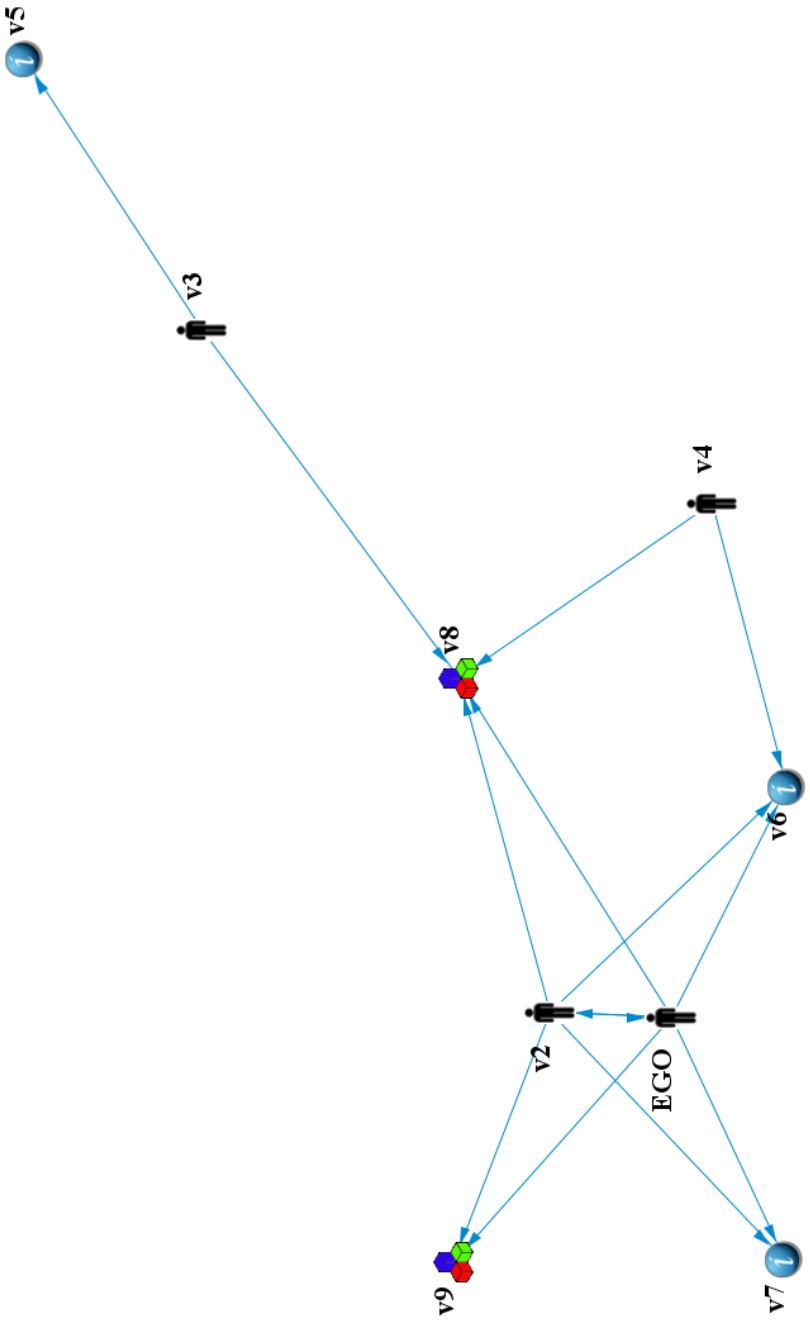
48. Weissman and Koe 1990 (2)



Visualisation 48.1: Weissman and Koe 1990 (2), Model One - vertex count=11, link count=15, density=0.136

	v1	v2	v3	v4	EGO	v6	v7	v8	v9	v10	v11
v1	0	1	0	0	0	0	0	0	0	0	0
v2	0	0	1	0	0	0	0	0	0	0	0
v3	0	0	0	0	0	0	0	1	1	1	1
v4	0	0	1	0	0	0	0	0	0	0	0
EGO	0	0	1	0	0	2	1	0	0	0	0
v6	0	0	1	0	2	0	1	0	0	0	0
v7	0	0	1	0	0	0	0	0	0	1	0
v8	0	0	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0

Matrix 48.1: Weissman and Koe 1990 (2), Model One - weighted matrix

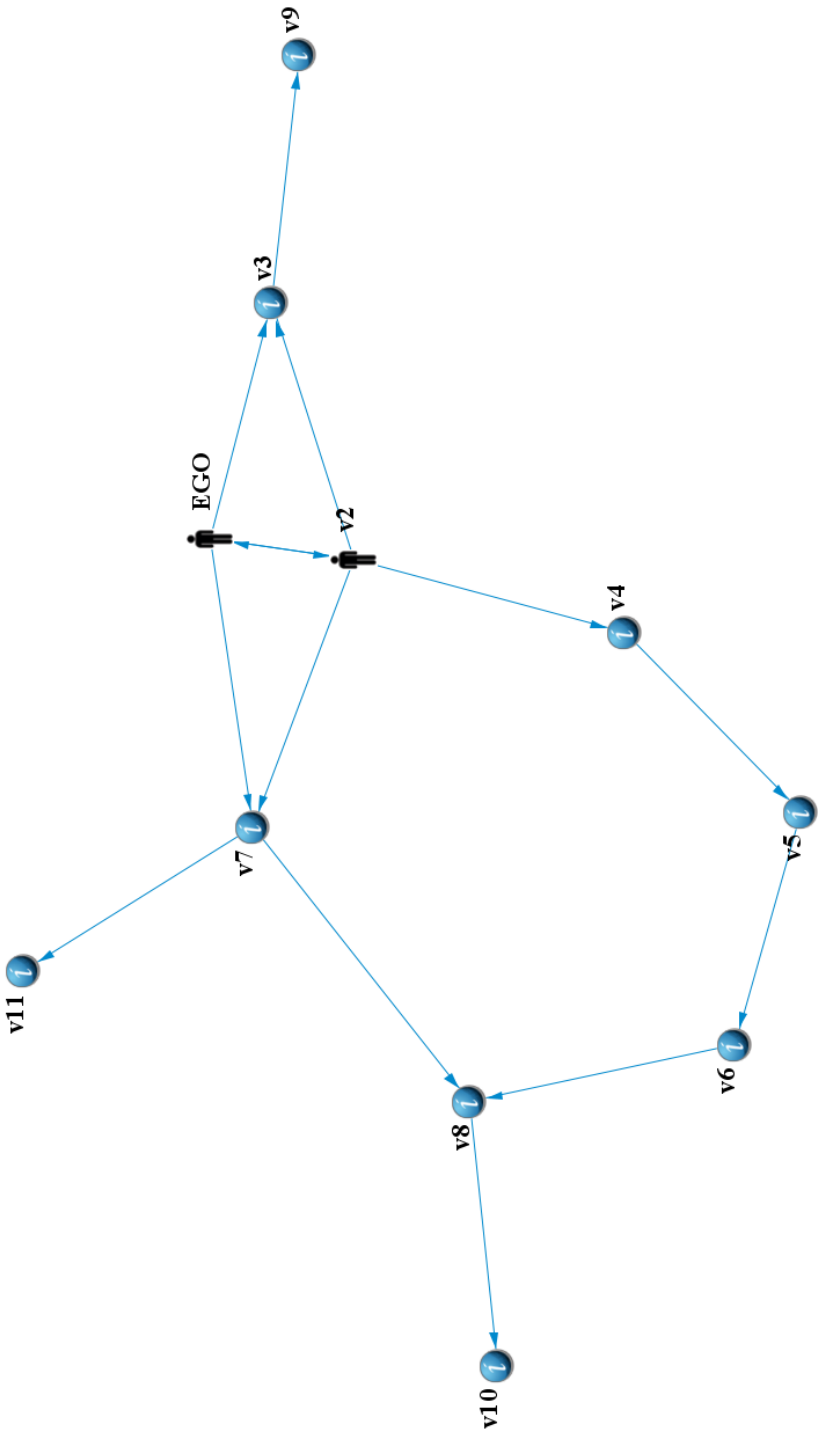


Visualisation 48.2: Weissman and Koe 1990 (2), Model Two - vertext count=9, link count=14, density=0.194

	EGO	v2	v3	v4	v5	v6	v7	v8	v9
EGO	0	1	0	0	0	1	1	1	1
v2	1	0	0	0	0	1	1	1	1
v3	0	0	0	0	1	0	0	1	0
v4	0	0	0	0	0	1	0	1	0
v5	0	0	0	0	0	0	0	0	0
v6	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0
v8	0	0	0	0	0	0	0	0	0
v9	0	0	0	0	0	0	0	0	0

Matrix 48.2: Weissman and Koe 1990 (2), Model Two - binary matrix

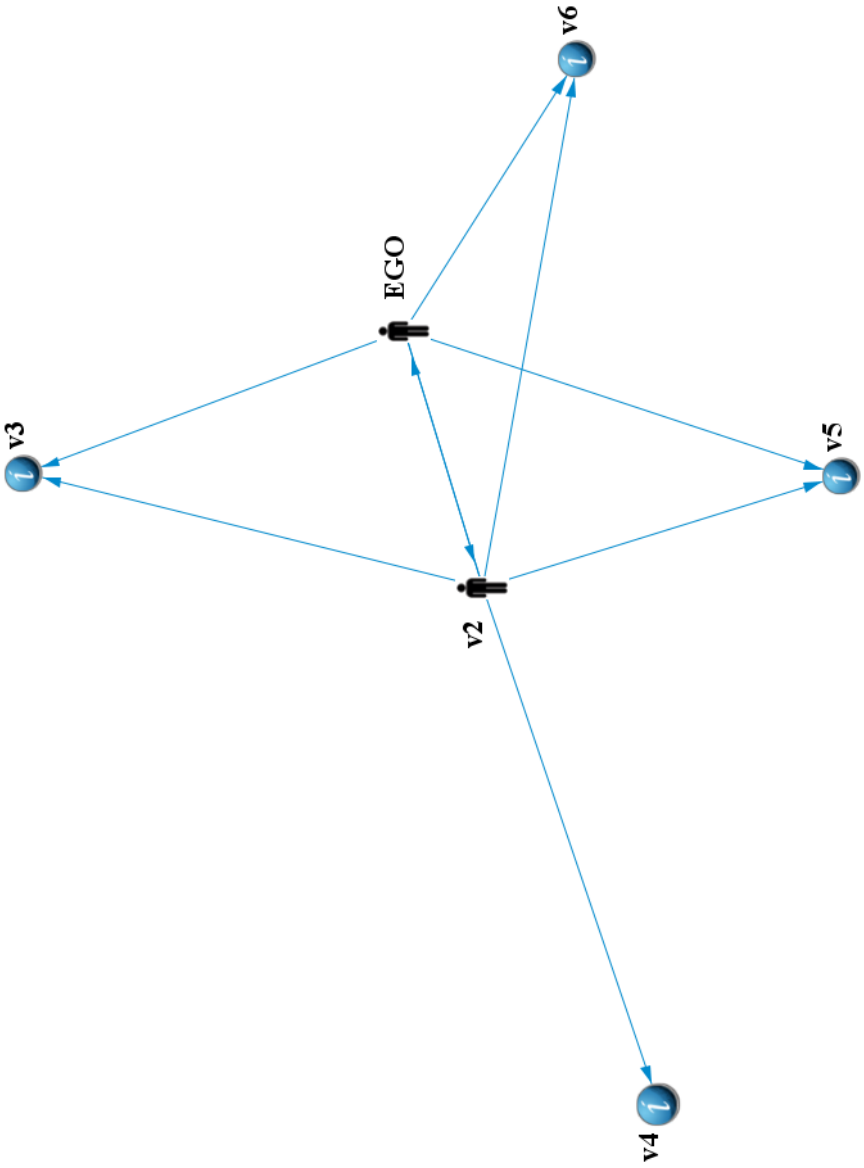
49. Weissman and Koe 1990 (3)



Visualisation 49.1: Weissman and Koe 1990 (3), Model One - vertex count=11, link count=14, density=0.127

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11
EGO	0	2	1	0	0	0	1	0	0	0	0
v2	2	0	1	1	0	0	1	0	0	0	0
v3	0	0	0	0	0	0	0	0	1	0	0
v4	0	0	0	0	1	0	0	0	0	0	0
v5	0	0	0	0	0	1	0	0	0	0	0
v6	0	0	0	0	0	0	0	1	0	0	0
v7	0	0	0	0	0	0	0	1	0	0	1
v8	0	0	0	0	0	0	0	0	0	1	0
v9	0	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0

Matrix 49.1: Weissman and Koe 1990 (3), Model One - weighted matrix

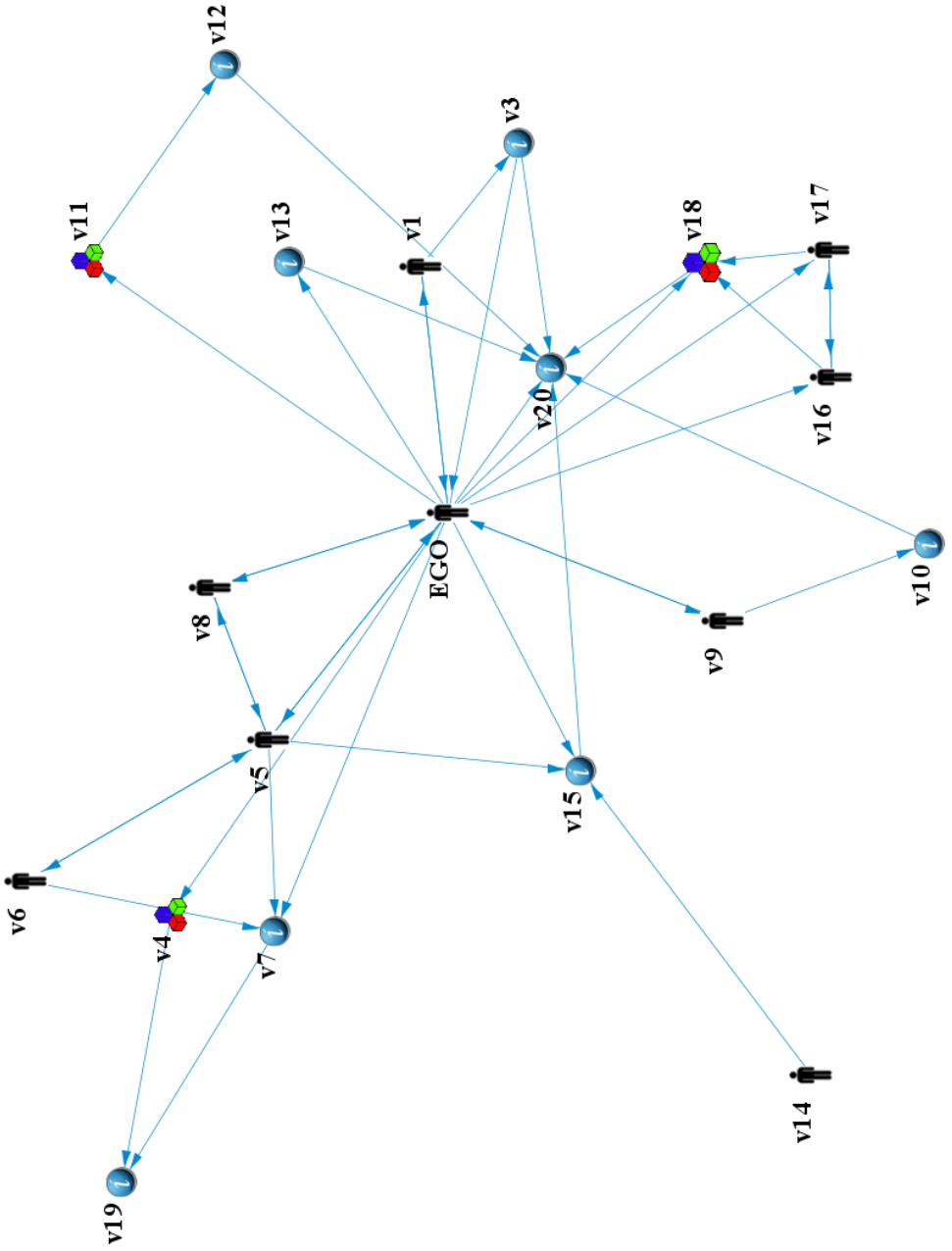


Visualisation 49.2: Weissman and Koe 1990 (3), Model Two - vertext count=6, link count=9, density=0.30$_0$

	EGO	v2	v3	v4	v5	v6
EGO	0	1	1	0	1	1
v2	1	0	1	1	1	1
v3	0	0	0	0	0	0
v4	0	0	0	0	0	0
v5	0	0	0	0	0	0
v6	0	0	0	0	0	0

Matrix 49.2: Weissman and Koe 1990 (3), Model Two - binary matrix

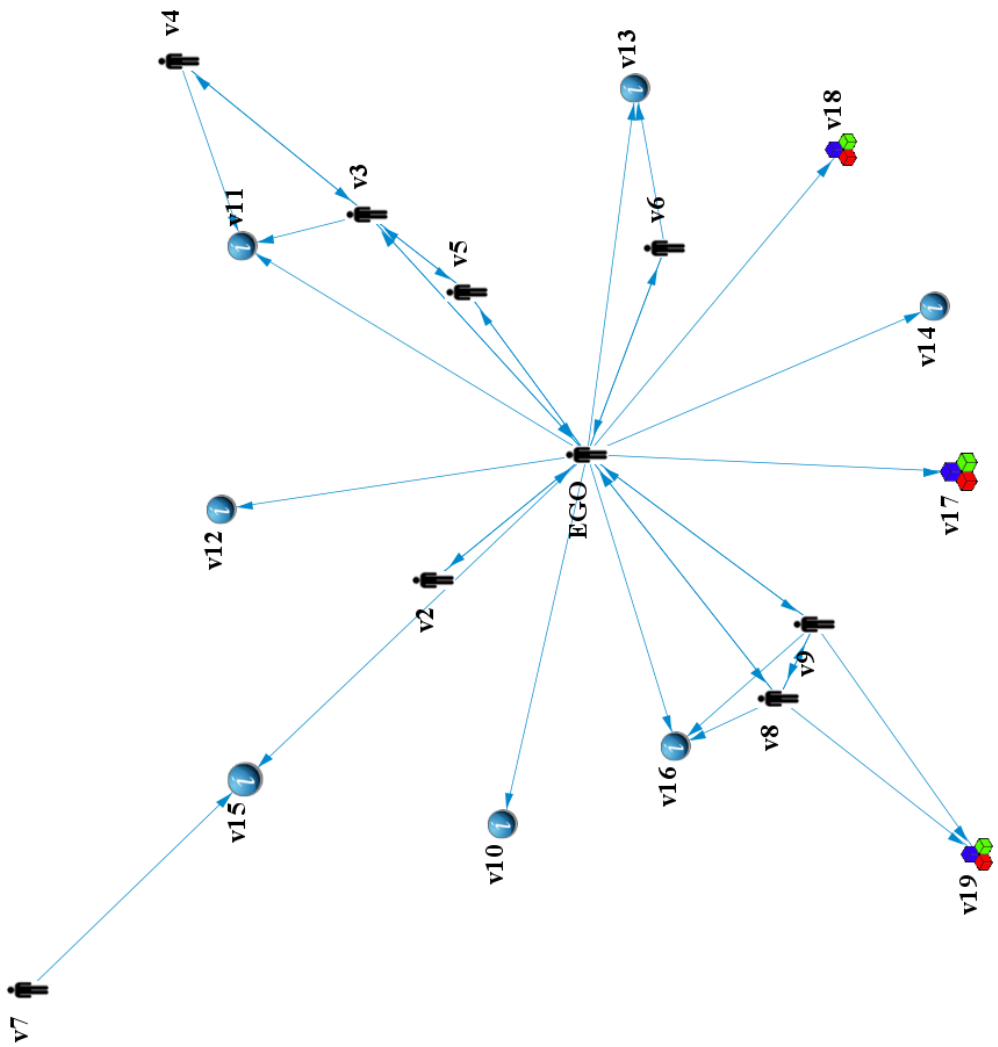
50. White 1987



Visualisation 50.1: White 1987, Model One - vertex count=20, link count=41, density=0.108

	v1	EGO	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19	v20
v1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EGO	1	0	0	1	3	0	1	1	1	0	1	0	1	0	1	1	1	1	0	1
v3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v5	0	2	0	0	0	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0
v6	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
v8	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v9	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v11	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 50.1: White 1987, Model One - weighted matrix



Visualisation 50.2: White 1987, Model Two - vertext count=19, link count=35, density=0.10$_2$

	EGO	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14	v15	v16	v17	v18	v19
EGO	0	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0
v2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v3	1	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
v4	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
v5	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v6	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
v7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
v8	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1
v9	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1
v10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
v19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Matrix 50.2: White 1987, Model Two - binary matrix

Supplementary Volume Bibliography

Note: Network portfolio page numbers for citations are provided at the end of entries.

Carley, K. M. (2012). **ORA*, Center for Computational Analysis of Social and Organizational Systems (CASOS), Institute for Software Research International (ISRI), School of Computer Science (SCS), Carnegie Mellon University (CMU), Pittsburgh, PA. Available at: `http://www.casos.cs.cmu.edu/projects/ora/software.php` (Accessed on: 9 September 2012). 516, 517

Garfield, E. (2012). *Citation Classics*. Available at: `http://www.citationclassics.org` (Accessed on: 9 September 2012). 513

Kolaczyk, E. D. (2009). *Statistical Analysis of Network Data: Methods and Models*, Springer, New York, NY. 515

Kozak, M. and Krzanowski, W. J. (2010). Effective presentation of data, *European Science Editing* **36**(2): 41–42. 517

Tauer, G. W. (2012). Excel/CSV to LaTeX table fragments converter. Available at: `http://www.acsu.buffalo.edu/~gregoryt/exceltolatex.html` (Accessed on: 16 May 2012). 518

SUPPLEMENTARY VOLUME BIBLIOGRAPHY

Appendix to the Supplementary Volume

The Text Descriptions for the Vertex Labels

This appendix lists the text descriptions attached to the vertex labels found in the portfolio networks. The text descriptions are reproduced here exactly as coded from the sample *Citation Classics*.[1] As such, the descriptions provide the link between the networks presented in the portfolio and the details found in the *Citation Classics* texts.

It is because of their linking role that the text descriptions are included in the network portfolio; however, the text descriptions are presented in an appendix rather than in the main body of the portfolio to emphasise the fact that the research focused on the generalised aspects of the serendipity event structures. The specifics of the text descriptions are not necessary to the understanding of these generalised aspects.

[1]The second-pass coding text descriptions are provided. See section 5.3 of the thesis, main volume, for further information on the coding process, especially the use of generic labels (e.g. 'result1', 'result2', 'finding', etc.).

1. Adams 1981

EGO = Adams
v2 = need
v3 = Sloper
v4 = Swettenham
v5 = Lillie
v6 = Glenner
v7 = test
v8 = spot tests
v9 = test stage1
v10 = DMAB
v11 = hydrochloric acid
v12 = test stage2
v13 = nitrous acid
v14 = reaction
v15 = protein identification
v16 = method

EGO = Adams
v2 = Sloper
v3 = Swettenham
v4 = Glenner
v5 = Lillie
v6 = histochemical methods
v7 = need
v8 = spot tests
v9 = blue colour
v10 = DMAB
v11 = hydrochloric acid
v12 = nitrous acid

2. Almeida 1980

v1 = x
v2 = hep B antigen
v3 = Zuckerman
v4 = Waterson
EGO = Almeida
v6 = research
v7 = EM
v8 = knowledge
v9 = silent carrier
v10 = micrograph1
v11 = nurse
v12 = micrograph2
v13 = chronic hepatic
v14 = micrograph3
v15 = batch
v16 = result1
v17 = result2

v1 = antigen discoverer
EGO = Almeida
v3 = Waterson
v4 = Zuckerman
v5 = silent carrier
v6 = nurse
v7 = chronic hepatic
v8 = visualisation
v9 = interest
v10 = recognition of antigen
v11 = use of negative staining
v12 = case1
v13 = case2
v14 = case3
v15 = dropping of penny
v16 = hep b antigen
v17 = electron microscope
v18 = micrograph1
v19 = micrograph2
v20 = micrograph3

3. Ashbaugh 1979

EGO = Ashbaugh
v2 = Petty
v3 = respirator1
v4 = patient1
v5 = respirator2
v6 = feature
v7 = patient2
v8 = literature
v9 = result1
v10 = result2

EGO = Ashbaugh
v2 = Petty
v3 = man
v4 = boy
v5 = reports in the literature
v6 = acute respiratory distress
v7 = failure
v8 = downhill course
v9 = feature
v10 = good recovery
v11 = respirator
v12 = Engstrom respirator

4. Bandurski 1981

v1 = Axelrod
EGO = Bandurski
v3 = reagent
v4 = paper
v5 = UV light
v6 = result1
v7 = result2

EGO = Bandurski
v2 = Axelrod
v3 = insufficient phosphorous for detection
v4 = blue spot
v5 = paper chromatogram
v6 = Hanes-Isher-wood reagent
v7 = uv illumination

5. Beadle 1978

v1 = Emerson
v2 = corn
v3 = Ephrussi
v4 = gene development
v5 = gene function
v6 = genetic traits
EGO = Beadle
v8 = study
v9 = drosophila
v10 = Kouvine
v11 = Tatum
v12 = Haagen-Smit
v13 = Fries
v14 = work
v15 = commercial people
v16 = sub-study
v17 = filamentous fungus 2
v18 = biotin medium
v19 = result2
v20 = result1
v21 = study2
v22 = study3
v23 = kynurenine
v24 = filamentous fungus 1
v25 = mutants

v1 = Emerson
EGO = Beadle
v3 = Ephrussi
v4 = Kouvine
v5 = Tatum
v6 = Haagen-Smit
v7 = Fries
v8 = genetic traits
v9 = gene development
v10 = gene function
v11 = knowledge of drosophila
v12 = knowledge of sea urchins
v13 = knowledge of frogs
v14 = techniques
v15 = enzymatic steps
v16 = relation
v17 = biosynthesis
v18 = work
v19 = knowledge of neurospora
v20 = determination
v21 = array
v22 = corn
v23 = drosophila
v24 = eye-buds
v25 = kynurenine
v26 = neurospora
v27 = biotin
v28 = mutants

6. Blanchard 1986

v1 = Keith
v2 = Woodcock
EGO = Blanchard
v4 = air bubbles
v5 = comb
v6 = droplets
v7 = experiment
v8 = jet drops
v9 = result1
v10 = result2

EGO = Blanchard
v2 = Keith
v3 = Woodcock
v4 = bubbles moved rapidly upwards
v5 = realisation
v6 = jet drop finding
v7 = PhD thesis
v8 = air bubbles
v9 = droplets
v10 = comb
v11 = jet drops
v12 = open sea
v13 = container of seawater

7. Boyd 1982

EGO = Boyd
v2 = Lebovitz
v3 = Pfeiffer
v4 = patient
v5 = literature
v6 = study
v7 = L-dopa
v8 = glucose study
v9 = glucose
v10 = result1
v11 = result2
v12 = concern
v13 = hypothesis
v14 = finding

EGO = Boyd
v2 = Lebovitz
v3 = Pfeiffer
v4 = patient
v5 = diabetes
v6 = thought re effect on diabetes
v7 = literature
v8 = animal data
v9 = dramatic rise
v10 = could not be blocked
v11 = insulin secretion
v12 = L-dopa
v13 = glucose

8. Brown 1981

EGO = Brown
v2 = biology/systematics
v3 = author
v4 = research
v5 = book
v6 = dispute
v7 = ecology/behaviour
v8 = equipment
v9 = paper

EGO = Brown
v2 = Author
v3 = biology and systematics
v4 = ecology and behavior
v5 = book content
v6 = response
v7 = paper

9. Bull 1986

v1 = Dacie
v2 = Brain
v3 = Hourihane
v4 = study1
v5 = study2
v6 = venom
v7 = animal model
v8 = Rubenberg
EGO = Bull
v10 = mechanical model
v11 = disk
v12 = result1
v13 = result2
v14 = study3
v15 = result3

EGO = Bull
v2 = Dacie
v3 = Brain
v4 = Hourihane
v5 = Rubenberg
v6 = role
v7 = association
v8 = question
v9 = failure of animal model
v10 = stable interaction
v11 = rabbits
v12 = venom
v13 = mechanical rabbit
v14 = disk
v15 = blood

10. Buzbee 1992

v1 = Golub
v2 = Nielson
v3 = Buneman
v4 = discussion
EGO = Buzbee
v6 = software
v7 = CORF
v8 = factorisation scheme
v9 = result
v10 = stability analysis2
v11 = Poisson solver
v12 = experiments
v13 = documentation
v14 = source code
v15 = findings
v16 = stability analysis
v17 = relationship
v18 = validation

EGO = Buzbee
v2 = Golub
v3 = Nielson
v4 = Buneman
v5 = software
v6 = documentation
v7 = source code
v8 = CORF
v9 = factorisation scheme
v10 = CORF stability analysis
v11 = Poisson solver
v12 = Poisson solver stability analysis
v13 = relationship
v14 = validation

11. Cleaver 1981

EGO = Cleaver
v2 = Perlman
v3 = article
v4 = experiment
v5 = XP
v6 = mutants

EGO = Cleaver
v2 = Perlman
v3 = needed select mutants
v4 = article
v5 = XP
v6 = guess
v7 = experiment result

12. Cohn 1989

EGO = Cohn
v2 = method
v3 = Varian Associates
v4 = spectrometer
v5 = result1
v6 = faculty
v7 = spectrometer2
v8 = Weissman
v9 = spectrometer3
v10 = Hughes
v11 = experiment
v12 = cigars
v13 = experiment2
v14 = changed ATP
v15 = result2
v16 = Lipkin
v17 = Velick
v18 = result4
v19 = comment
v20 = brass sieve
v21 = resin
v22 = copper
v23 = cigar tubes
v24 = result3

EGO = Cohn
v2 = Varian Associates
v3 = faculty
v4 = Weissman
v5 = Hughes
v6 = Lipkin
v7 = Velick
v8 = could not do PNMR
in St. Louis
v9 = VA sole manufacturers
v10 = observations
v11 = spectra
v12 = paramagnetic effect
v13 = revelation
v14 = finding
v15 = spectrometer
v16 = spectrometer2
v17 = spectrometer3
v18 = concentration
v19 = cigars
v20 = cigar tubes
v21 = enzyme
v22 = column
v23 = resin
v24 = brass sieve
v25 = resin ATP

13. Dicke 1980

EGO = Dicke
v2 = research
v3 = amplifier
v4 = idea
v5 = switching principle
v6 = radiometer

EGO = Dicke
v2 = switching principle
v3 = lock-in amplifier
v4 = radiometer

14. Ey 1989

v1 = MacKenzie
v2 = Prowse
v3 = experiment1
v4 = PBS
v5 = column
EGO = Ey
v7 = experiment2
v8 = phosphate buffer
v9 = phenomenon
v10 = experiment3
v11 = Jenkin
v12 = research
v13 = follow-up experiments
v14 = sera
v15 = result1
v16 = result2
v17 = hypothesis
v18 = result3
v19 = result4

EGO = Ey
v2 = Prowse
v3 = Jenkin
v4 = MacKenzie
v5 = research
v6 = cold room result
v7 = warm room result
v8 = ph result
v9 = follow up results
v10 = PBS
v11 = column
v12 = phosphate buffer
v13 = mouse sera

15. Field 1984

v1 = Belousov
v2 = Zhabotinskii
v3 = Noyes
EGO = Field
v5 = Koros
v6 = experiment
v7 = value
v8 = unrelated paper
v9 = older paper
v10 = kinetic data
v11 = chemical reaction
v12 = paper

EGO = Field
v2 = Belousov
v3 = Zhabotinskii
v4 = Noyes
v5 = Koros
v6 = chemical reaction
v7 = experimental work
v8 = international mails
v9 = value
v10 = kinetic data
v11 = older paper
v12 = unrelated paper
v13 = paper

16. Fitzgerald 1980

v1 = Koch
v2 = Keyes
v3 = diet
v4 = golden hamsters
v5 = Unit
v6 = antibiotics
v7 = albino hamsters
v8 = cage study
EGO = Fitzgerald
v10 = study
v11 = organisms
v12 = streptomycin
v13 = result3
v14 = result4
v15 = postulate
v16 = result1
v17 = result2
v18 = rats

v1 = Koch
v2 = Keyes
EGO = Fitzgerald
v4 = Unit
v5 = postulate
v6 = appeared to be virtually immune
v7 = high caries activity
v8 = caged together developed caries
v9 = could acquire infection on contact
v10 = recognisation
v11 = single carciogenic type
v12 = antibiotics
v13 = golden hamsters
v14 = albino hamsters
v15 = diet
v16 = rats
v17 = organisms
v18 = streptomycin

17. Fogg 1989

v1 = Fritsch
EGO = Fogg
v3 = Huxley
v4 = Pearsall
v5 = allometry
v6 = heterocysts
v7 = Stewart
v8 = text
v9 = Fay
v10 = pigments
v11 = knowledge2
v12 = knowledge1
v13 = finding
v14 = conversation
v15 = knowledge3
v16 = result

EGO = Fogg
v2 = Fritsch
v3 = Huxley
v4 = Pearsall
v5 = Stewart
v6 = Fay
v7 = Previous workers
v8 = allometry
v9 = result
v10 = oxygen-in-activation
v11 = text
v12 = pigment finding
v13 = conversation
v14 = everything clicked into place
v15 = previous result
v16 = heterocycts
v17 = pigments
v18 = nitrate
v19 = air
v20 = ammonium salts
v21 = alga

18. Galanter 1983

EGO = Galanter
v2 = Colleagues
v3 = ideas
v4 = literature
v5 = paper
v6 = Indian law
v7 = American law

EGO = Galanter
v2 = colleagues
v3 = Indian Law
v4 = empirical studies
v5 = ideas
v6 = notes
v7 = American law
v8 = paper

19. Giblett 1982

v1 = Meuwissen
v2 = Pollara
v3 = child1
v4 = parents
v5 = blood1
v6 = blood2
EGO = Giblett
v8 = Anderson
v9 = result
v10 = Cohen
v11 = child2
v12 = blood3
v13 = hypothesis

EGO = Giblett
v2 = Anderson
v3 = Meuwissen
v4 = Pollara
v5 = child1
v6 = parents1
v7 = child2
v8 = Cohen
v9 = parents2
v10 = absent ADA finding
v11 = low ADA finding
v12 = hypothesis
v13 = knowledge of child
v14 = blood1
v15 = blood2
v16 = blood3
v17 = blood4
v18 = telephone

20. Gocke 1985

EGO = Gocke
v2 = Hsu
v3 = Morgan
v4 = Bombardieri
v5 = Lockshin
v6 = Christian
v7 = blood recipients
v8 = studies
v9 = patient
v10 = condition1
v11 = condition2
v12 = infection
v13 = experiments
v14 = patients
v15 = control subjects
v16 = control experiments
v17 = finding
v18 = evidence

EGO = Gocke
v2 = Hsu
v3 = Morgan
v4 = Bombardieri
v5 = Lockshin
v6 = Christian
v7 = blood recipients
v8 = patient
v9 = ten other patients
v10 = control patients
v11 = illness
v12 = positive serum
v13 = negative serum
v14 = biopsy
v15 = complex finding
v16 = control patient finding
v17 = serum
v18 = tissues

21. Gordon 1981

v1 = Bartter
v2 = patient
EGO = Gordon
v4 = Davidson
v5 = Middleton
v6 = intubation
v7 = serum
v8 = study
v9 = Fales
v10 = PVP
v11 = Briner
v12 = hypoproteinemia
v13 = fatty acids
v14 = plasma etc.
v15 = result
v16 = finding
v17 = studies

EGO = Gordon
v2 = Barrter
v3 = patient
v4 = Davidson
v5 = Middleton
v6 = Fales
v7 = Briner
v8 = hypoproteinemia
v9 = fatty acids
v10 = guess
v11 = duodenal intubations
v12 = positive result
v13 = organic chemistry
v14 = stool finding
v15 = antiserum
v16 = duodenal juice
v17 = radioactive PVP
v18 = stools

22. Graham 1988

v1 = van der Eb
EGO = Graham
v3 = wife
v4 = Gold
v5 = de Waard
v6 = postdoc studies
v7 = adenoviruses
v8 = cancer
v9 = application
v10 = NCI
v11 = DEAE-dextran
v12 = methods
v13 = study
v14 = slow result
v15 = suggestion
v16 = knowledge
v17 = experiments
v18 = MGCL2
v19 = CACL2
v20 = precipitate
v21 = result1
v22 = result2

EGO = Graham
v2 = wife
v3 = Gold
v4 = de Waard
v5 = van der Eb
v6 = NCI
v7 = cancer
v8 = adenoviruses research
v9 = application
v10 = slow result
v11 = suggestion
v12 = knowledge of cations
v13 = first results
v14 = final result
v15 = methods
v16 = adenoviruses
v17 = DEAE-Dextran
v18 = MgCl2
v19 = CaCl2
v20 = percipitate
v21 = solutions

23. Greenwood 1977

v1 = Berson
v2 = Yalow
v3 = paper
EGO = Greenwood
v5 = goal
v6 = Gemzell
v7 = growth hormone
v8 = Deutsch
v9 = knowledge
v10 = Read
v11 = tanned assay method
v12 = Hunter
v13 = bioassay
v14 = Glover
v15 = experiments
v16 = techniques
v17 = chloramine-T
v18 = final experiment
v19 = final technique
v20 = radioimmunoassay
v21 = prolactin
v22 = result1
v23 = iodine 131
v24 = carrier-free iodine 131
v25 = failed results
v26 = final result

EGO = Greenwood
v2 = Hunter
v3 = Glover
v4 = Gemzell
v5 = Berson
v6 = Yalow
v7 = Deutsch
v8 = Read
v9 = protein chemistry
v10 = immunochemistry
v11 = bioassay
v12 = tanned cell method
v13 = apparent failure
v14 = radio
v15 = handling
v16 = don't
v17 = just making available
v18 = realisation
v19 = presaturation
v20 = repeated failure
v21 = technique
v22 = growth hormone
v23 = iodine 131
v24 = carrier-free iodine 131
v25 = chloramine-T
v26 = sephadex
v27 = metabisulfite
v28 = albumin
v29 = potassium iodide

24. Harrison 1987

v1 = X
v2 = MH paper
v3 = Hall
v4 = report
EGO = Harrison
v6 = Saunders
v7 = Biebuyck
v8 = Hickman
v9 = Dent
v10 = Weaver
v11 = Terblanche
v12 = transplantation program
v13 = anaesthesia
v14 = pig1
v15 = pig2
v16 = pig3
v17 = pig4
v18 = pig5
v19 = pig6
v20 = result
v21 = syndrome
v22 = MH
v23 = conclusion

EGO = Harrison
v2 = Saunders
v3 = Biebuyck
v4 = Hickman
v5 = Dent
v6 = Weaver
v7 = Terblanche
v8 = Hall
v9 = Unknown
v10 = MH
v11 = hot pig result
v12 = identical description
v13 = non-hot pig result
v14 = pig1
v15 = pig2
v16 = pig3
v17 = pig4
v18 = pig5
v19 = pig6
v20 = other pigs
v21 = anaesthesia
v22 = littermate pigs
v23 = suxamethonium

25. Hodge 1979

EGO = Hodge
v2 = assignment
v3 = reaction1
v4 = compound1
v5 = D-glucose
v6 = reaction2
v7 = compound2
v8 = reaction3
v9 = compound3
v10 = experiment
v11 = result2
v12 = literature
v13 = result1
v14 = result3

EGO = Hodge
v2 = literature
v3 = crystals at last
v4 = never crystalized
v5 = D-glucose had condensed with the piperideine
v6 = isomerisation catalyst
v7 = D-glucose
v8 = mixture1
v9 = mixture2
v10 = mixture3
v11 = residue

26. Hudson and Pope 1988

EGO = Hudson
v2 = report
v3 = study
v4 = bulimic patients
v5 = family histories
v6 = DST results
v7 = Pope
v8 = result
v9 = pilot study
v10 = Jonas
v11 = Yurgelun-Todd
v12 = ion-pump activity
v13 = anorexic patients
v14 = assay
v15 = follow-up study

EGO = Hudson
v2 = bulimic patients
v3 = Pope
v4 = Jonas
v5 = Yurgelun-Todd
v6 = report
v7 = interview responses
v8 = DST results
v9 = biological psychiatry
v10 = imipramine tablets
v11 = lactose
v12 = gelatin tablets

27. Kanner 1979

EGO = Kanner
v2 = student
v3 = job
v4 = publications
v5 = Meyer
v6 = Donald T
v7 = children
v8 = name
v9 = service
v10 = result

EGO = Kanner
v2 = student
v3 = Meyer
v4 = Donald
v5 = children
v6 = X who brought Donald
v7 = Y who offered job
v8 = electrocardiography
v9 = reports
v10 = behaviour pattern
v11 = job
v12 = name

This page is intentionally left blank.

28. Kappas 1987 (Model One)

v1 = Alvares
v2 = Anderson
EGO = Kappas
v4 = volunteer1
v5 = volunteer2
v6 = volunteer3
v7 = volunteer4
v8 = volunteer5
v9 = volunteer6
v10 = volunteer7
v11 = volunteer8
v12 = volunteer9
v13 = diet1
v14 = Atkins diet
v15 = phenacetin
v16 = blood1
v17 = blood2
v18 = blood3
v19 = blood4
v20 = blood5
v21 = blood6
v22 = blood7
v23 = blood8
v24 = blood9
v25 = diet2
v26 = blood10
v27 = blood11
v28 = blood12
v29 = blood13
v30 = blood14
v31 = blood15
v32 = blood16
v33 = blood17
v34 = blood18
v35 = result2
v36 = result3
v37 = result1
v38 = finding

28. Kappas 1987, cont. (Model Two)

EGO = Kappas
v2 = Anderson
v3 = Alvares
v4 = volunteer1
v5 = volunteer2
v6 = volunteer3
v7 = volunteer4
v8 = volunteer5
v9 = volunteer6
v10 = volunteer7
v11 = volunteer8
v12 = volunteer9
v13 = blood result1
v14 = blood result2
v15 = blood result3
v16 = finding
v17 = Atkins diet content
v18 = special diet content
v19 = control diet content
v20 = blood1
v21 = blood2
v22 = blood3
v23 = blood4
v24 = blood5
v25 = blood6
v26 = blood7
v27 = blood8
v28 = blood9
v29 = blood10
v30 = blood11
v31 = blood12
v32 = blood13
v33 = blood14
v34 = blood15
v35 = blood16
v36 = blood17
v37 = blood18
v38 = special diet
v39 = control diet
v40 = Atkins diet
v41 = phenatecin

29. Kirk 1989

EGO = Kirk
v2 = Lorenz
v3 = Zeikus
v4 = Connors
v5 = Schutz
v6 = study
v7 = radioactive lignins
v8 = fungi
v9 = cultures1
v10 = cultures2
v11 = result1
v12 = result2
v13 = further experiment
v14 = cultures3
v15 = lab notes
v16 = result3
v17 = result4

EGO = Kirk
v2 = Lorenz
v3 = Schutz
v4 = Connors
v5 = Zeikus
v6 = evidence
v7 = bacterial experience
v8 = fungi result1
v9 = fungi result2
v10 = lab notes
v11 = lignins
v12 = fungi
v13 = cultures
v14 = liquid
v15 = wood
v16 = diluted solution

30. Kroto 1993

EGO = Kroto
v2 = study
v3 = Avery
v4 = Oka
v5 = Alexander
v6 = Kirby
v7 = Walton
v8 = Broten
v9 = Smalley
v10 = finding
v11 = Curl
v12 = proposal
v13 = seminar
v14 = Exxon
v15 = Heath
v16 = O'Brien
v17 = Liu
v18 = experiment1
v19 = family
v20 = run
v21 = print out
v22 = run2
v23 = cages
v24 = pentagons
v25 = hexagons
v26 = Heath's wife
v27 = ball
v28 = dome
v29 = stardrome
v30 = result
v31 = chains
v32 = AP2
v33 = C60
v34 = C70
v35 = consensus
v36 = main finding

EGO = Kroto
v2 = Avery
v3 = Oka
v4 = Alexander
v5 = Kirby
v6 = Walton
v7 = Broten
v8 = Smalley
v9 = Curl
v10 = Exxon
v11 = Heath
v12 = O'Brien
v13 = Liu
v14 = Heath's wife
v15 = study
v16 = finding
v17 = proposal
v18 = seminar
v19 = discovery
v20 = print-out
v21 = log book
v22 = cages
v23 = pentagons
v24 = hexagons
v25 = dome
v26 = stardrome
v27 = result
v28 = chains
v29 = consensus
v30 = C60
v31 = C70
v32 = AP2
v33 = ball

31. Kuwabara 1993

EGO = Kuwabara
v2 = Murata
v3 = study
v4 = preparation
v5 = treatment
v6 = finding
v7 = proteins
v8 = method

EGO = Kuwabara
v2 = Murata
v3 = survey
v4 = treatment
v5 = activity
v6 = 33-kDA protein
v7 = preparation
v8 = Triton X100
v9 = cations

32. Levy 1981

v1 = MDs
v2 = antiserum
EGO = Levy
v4 = gamma globulin
v5 = Sober
v6 = problem
v7 = solution

v1 = MDs
EGO = Levy
v3 = Sober
v4 = confused results
v5 = suggestion
v6 = chemistry
v7 = method
v8 = antiserum
v9 = gamma globulin

33. Mayer 1992

v1 = Reynolds
v2 = report
v3 = Liebeskind
v4 = Wolfle
v5 = dissertation
EGO = Mayer
v7 = rats
v8 = conclusion
v9 = incidental observation
v10 = Akii
v11 = Carder
v12 = experiments
v13 = literature2
v14 = conclusion2
v15 = proposal1
v16 = proposal2
v17 = analgesia
v18 = literature
v19 = theory

EGO = Mayer
v2 = Reynolds
v3 = Wolfle
v4 = Liebeskind
v5 = Carder
v6 = Akii
v7 = report
v8 = perplexing observations
v9 = incidental observation
v10 = literature
v11 = literature2
v12 = dissertation
v13 = rats
v14 = sharp metal
v15 = bar

34. Milstein and Brownlee 1992

v1 = Fellner
v2 = Sanger
EGO = Millstein
v4 = isolation
v5 = Stavenezer
v6 = Huang
v7 = rabbit reticulocyte
v8 = Mathews
v9 = KrebsII
v10 = Harrison
v11 = Hunt
v12 = Cartwright
v13 = isolation2
v14 = assay
v15 = system
v16 = result2
v17 = result3
v18 = hypothesis
v19 = result
v20 = result4

EGO = Millstein
v2 = Fellner
v3 = Sanger
v4 = Harrison
v5 = Stavenezer
v6 = Huang
v7 = Mathews
v8 = Hunt
v9 = Cartwright
v10 = failures
v11 = assay
v12 = system
v13 = successful result
v14 = novel result
v15 = lysate
v16 = extracts
v17 = gel

35. Moorhead 1983

v1 = Osgood
v2 = Krippaehne
v3 = gradient culture method
v4 = cells
v5 = glass slide
v6 = Hungerford
v7 = Nowell
v8 = Mellman
EGO = Moorhead
v10 = culture vessel
v11 = Rothfels
v12 = Siminovitch
v13 = experiment1
v14 = method
v15 = result2
v16 = Manson
v17 = experiment2
v18 = trial and error
v19 = experiment3
v20 = successful trial
v21 = result1
v22 = failures1
v23 = mouse cells
v24 = failure2
v25 = result3

EGO = Moorhead
v2 = Osgood
v3 = Krippaehne
v4 = Nowell
v5 = Hungerford
v6 = Mellman
v7 = Rothfels
v8 = Siminovitch
v9 = Manson
v10 = PHA as a mitogen
v11 = air-drying technique
v12 = cultivation method
v13 = observation
v14 = disappointment
v15 = factor
v16 = result
v17 = cells
v18 = glass slide
v19 = culture vessel
v20 = mouse cells
v21 = hair dryers
v22 = dry ice
v23 = distilled water
v24 = fixative
v25 = slide

36. Myers 1993

v1 = Heart surgeons
EGO = Myers
v3 = Ross
v4 = Newton
v5 = Luetscher
v6 = Perlroth
v7 = study
v8 = patients
v9 = GFR
v10 = result2
v11 = study2
v12 = finding
v13 = result1
v14 = cyclosporine
v15 = result3

EGO = Myers
v2 = Ross
v3 = Newton
v4 = Luetscher
v5 = Perlroth
v6 = patients
v7 = heart surgeons
v8 = finding
v9 = normal rate
v10 = low rate
v11 = charts
v12 = cyclosporine

37. Niswender 1980

v1 = Midgley
v2 = criteria
v3 = Dzuik
v4 = Nalbandov
EGO = Niswender
v6 = PhD
v7 = ovine LH
v8 = other rabbits
v9 = rabbit 15
v10 = antibodies
v11 = Reichert
v12 = Monroe
v13 = experiments
v14 = rat LH
v15 = FSH
v16 = TSH
v17 = procedures
v18 = result1
v19 = purified LH
v20 = result2

EGO = Niswender
v2 = Midgley
v3 = Dzuik
v4 = Nalbandov
v5 = Reichert
v6 = Monroe
v7 = rabbit15 result
v8 = procedures
v9 = criteria
v10 = specificity result
v11 = other rabbits
v12 = rabbit15
v13 = ovine LH
v14 = antibodies
v15 = purified LH
v16 = rat LH
v17 = TSH
v18 = FSH

38. Nowell 1977

v1 = Osgood
v2 = method
EGO = Nowell
v4 = technician
v5 = patient
v6 = non-leukemic blood1
v7 = leukocytes1
v8 = culture1
v9 = non-leukemic blood2
v10 = leukocytes2
v11 = culture2
v12 = study1
v13 = leukemic cells
v14 = Hungerford
v15 = study2
v16 = chromosomes
v17 = study3
v18 = study4
v19 = result3
v20 = result4
v21 = PHA
v22 = result1
v23 = result2

EGO = Nowell
v2 = Osgood
v3 = technician
v4 = patient
v5 = Hungerford
v6 = Osgood method
v7 = remission
v8 = confirmation of suspicion
v9 = initiator of mitosis
v10 = culture system
v11 = pha
v12 = leukocytes
v13 = mitoses
v14 = leukemic cells
v15 = Philadelphia chromosome

39. Pedersen 1985

EGO = Pedersen
v2 = Harrington
v3 = Carter
v4 = Schroeder
v5 = Pariser
v6 = ligands
v7 = result2
v8 = Malinowski
v9 = analytical groups
v10 = technical staff
v11 = result1
v12 = crown ethers

EGO = Pedersen
v2 = Harrington
v3 = Carter
v4 = Schroeder
v5 = Pariser
v6 = Malinowski
v7 = analytical groups
v8 = technical staff
v9 = by-product finding
v10 = stable complexes
v11 = unique properties
v12 = novel result
v13 = technical knowledge
v14 = quad ligands
v15 = reactant
v16 = ether
v17 = by-product
v18 = quint ligands
v19 = sodium compound
v20 = methanol
v21 = analytical resources
v22 = crown ethers

40. Poulik 1984

EGO = Poulik
v2 = Frazer
v3 = project
v4 = method1
v5 = toxin
v6 = Smithies
v7 = Emily
v8 = project2
v9 = method2
v10 = toxin2
v11 = article
v12 = method3
v13 = experiment
v14 = compound
v15 = gel slab
v16 = result1
v17 = result2
v18 = electrode vessels
v19 = result3

EGO = Poulik
v2 = Emily
v3 = Frazer
v4 = Smithies
v5 = prototypic immuno-electrophoresis method
v6 = method not suited
v7 = starch gel electrophoresis
v8 = time consuming results
v9 = article
v10 = completed run
v11 = Emily's mistake
v12 = diptheria toxin
v13 = starch gel
v14 = molar tris
v15 = molar citric acid
v16 = gel slab
v17 = electrode vessels

41. Reynolds 1981

EGO = Reynolds
v2 = stain
v3 = lead
v4 = NaOH
v5 = CO2 free water
v6 = product
v7 = sections
v8 = knowledge
v9 = method
v10 = colleagues
v11 = comment
v12 = response
v13 = organic ligand
v14 = percipitates
v15 = stain2

EGO = Reynolds
v2 = Colleagues
v3 = ruined sections
v4 = biophysics knowledge
v5 = comment
v6 = lead
v7 = NaOH
v8 = CO2 free water
v9 = CO2 free atmosphere
v10 = sections
v11 = stain
v12 = precipitates
v13 = organic ligand
v14 = new stain

42. Schaefer 1981

EGO = Schaefer
v2 = Bell
v3 = PARI
v4 = theory
v5 = research
v6 = methods

EGO = Schaefer
v2 = Bell
v3 = theory
v4 = research
v5 = PARI
v6 = findings
v7 = method

43. Schatzmann 1984

EGO = Schatzmann
v2 = Wilbrandt
v3 = photometer
v4 = red cells1
v5 = suggestion
v6 = mineralcortoids
v7 = experiment1
v8 = red cells2
v9 = experiment2
v10 = strophanthoside
v11 = red cells3
v12 = experiment3
v13 = Warburg machine
v14 = glycolysis
v15 = NaK
v16 = result1
v17 = result2
v18 = result3

EGO = Schatzmann
v2 = Wilbrandt
v3 = NaK pump
v4 = Na knowledge
v5 = idea
v6 = loose thinking
v7 = inhibitory action
v8 = no leak
v9 = glycoloysis
v10 = conclusion
v11 = photometer
v12 = mineralocorticoids
v13 = red cells
v14 = strophanthoside
v15 = Warburg apparatus

44. Smythe 1980

EGO = Smythe
v2 = children
v3 = blood
v4 = septacemia
v5 = afebrile state
v6 = infection hypothesis
v7 = leucocyte response
v8 = herpes tendency
v9 = monilial infections
v10 = neg tuberculin test
v11 = measles course
v12 = smears
v13 = Grace
v14 = chromosome studies
v15 = Schonland
v16 = Brereton-Stiles
v17 = Coovadia
v18 = Loening
v19 = Mafoyane
v20 = Parent
v21 = Vos
v22 = study
v23 = serology
v24 = lymphocyte transformation
v25 = path studies
v26 = stimulation
v27 = immunological response
v28 = observation
v29 = result

v1 = Grace
EGO = Smythe
v3 = Schonland
v4 = Brereton-Stiles
v5 = Coovadia
v6 = Loening
v7 = Mafoyane
v8 = Parent
v9 = Vos
v10 = children
v11 = afebrile state
v27 = infection hypothesis
v12 = leucocyte response
v28 = herpes tendency
v13 = monilial infections
v14 = neg tuberculin test
v15 = measles course
v16 = immunological response
v17 = chromosome studies
v18 = serology
v19 = lymphocyte transformation
v20 = path studies
v21 = chance observation
v22 = phytohaemagglutinin stimulation
v23 = autopsies
v24 = early days knowledge
v25 = finding
v26 = blood cultures
v29 = smears

45. Sussman 1990

v1 = Sherif
EGO = Sussman
v3 = proposal
v4 = supervisors
v5 = Hill
v6 = Waller
v7 = course
v8 = text
v9 = idea
v10 = group processes
v11 = doctoral dissertation

EGO = Sussman
v2 = Sherif
v3 = supervisors
v4 = Hill
v5 = Waller
v6 = group processes
v7 = proposal
v8 = text
v9 = dissertation

46. Warner 1977

v1 = Rich
EGO = Warner
v3 = Nirenberg
v4 = Matthei
v5 = Darnell
v6 = trial
v7 = ribosomes 1
v8 = Knopf
v9 = PhD
v10 = experiment
v11 = control experiment
v12 = reticulocytes
v13 = H leucine
v14 = ribosomes 2
v15 = experiment 3
v16 = sucrose gradient
v17 = cell lysate
v18 = sediment
v19 = Slayter
v20 = Hall
v21 = electron microscope
v22 = data
v23 = concept
v24 = protein synthesis
v25 = polio RNA
v26 = result
v27 = result 2

v1 = Rich
EGO = Warner
v3 = Darnell
v4 = Knopf
v5 = Slayter
v6 = Hall
v7 = Nirenberg
v8 = Matthei
v9 = protein synthesis
v10 = report finding
v11 = effectiveness of eukaryotic ribosomes
v12 = Dintzis' experiment
v13 = phd experiment
v14 = peaks representing structures
v15 = structures containing several ribosomes
v16 = conceptual foundation
v17 = electron microscope data
v18 = f. coli ribosomes
v19 = poliovirus RNA
v20 = reticulocyte ribosomes
v21 = H leucine
v22 = cell lysate
v23 = sucrose gradient
v24 = electron microscope

47. Weissman and Koe 1990 (1)

v1 = authors
v2 = reference1
v3 = finding
v4 = p-chloroamphetamine
EGO = Weissman
v6 = Koe
v7 = trial1
v8 = PCPA
v9 = rats
v10 = trial2
v11 = result2
v12 = result1
v13 = result3

EGO = Weissman
v2 = Koe
v3 = Authors
v4 = finding
v5 = one-hour measurement
v6 = 24-hour measurement
v7 = comparison
v8 = rats
v9 = p-chloroamphetamine
v10 = PCPA

48. Weissman and Koe 1990 (2)

v1 = researchers
v2 = finding
v3 = AMT precursor
v4 = chemists
EGO = Weissman
v6 = Koe
v7 = experiments
v8 = tyrosine
v9 = different purpose
v10 = hypothesis
v11 = result

EGO = Weissman
v2 = Koe
v3 = authors
v4 = chemists
v5 = report
v6 = learned that
v7 = result
v8 = AMT-precursor
v9 = rats

49. Weissman and Koe 1990 (3)

EGO = Weissman
v2 = Koe
v3 = literature
v4 = education project
v5 = review
v6 = toxicity2
v7 = experiment
v8 = hypothesis
v9 = toxicity1
v10 = finding
v11 = additional finding

EGO = Weissman
v2 = Koe
v3 = neglected literature
v4 = review
v5 = answer
v6 = surprising benefits

50. White 1987

v1 = Rawlings
EGO = White
v3 = brainstorming
v4 = defoliating insects
v5 = Andrewartha
v6 = Birch
v7 = book
v8 = zoologists
v9 = farmer
v10 = facts
v11 = insect
v12 = realisation
v13 = teaching
v14 = Sinclair
v15 = papers
v16 = Watson
v17 = Moss
v18 = red grouse
v19 = new explanation
v20 = hypothesis

EGO = White
v2 = Rawlings
v3 = Andrewartha
v4 = Birch
v5 = zoologists
v6 = farmer
v7 = Sinclair
v8 = Watson
v9 = Moss
v10 = dissatisfaction
v11 = book
v12 = hypothesis
v13 = facts
v14 = realisation
v15 = papers
v16 = red grouse work
v17 = defoliating insects
v18 = insect
v19 = red grouse